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Learning Large Lessons

The Evolving Roles of Ground Power and Air Power in the Post–Cold War Era

EXECUTIVE SUMMARY

David E. Johnson

Prepared for the United States Air Force

RAND PROJECT AIR FORCE

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Cover photo: Several of the generals who developed and employed the air-ground cooperation system for the U.S. 12th Army Group during World War II in Western Europe at Fort Ehrenbreitstein, Koblenz, Germany on April 6, 1945. From left to right: Lieutenant General George S. Patton, Jr., 3d Army; Major General Otto Paul "Opie" Weyland, XIX Tactical Air Command; General Omar N. Bradley, 12th Army Group; Major General Hoyt S. Vandenberg, Ninth Air Force; Lieutenant General Courtney H. Hodges, First Army; and Major General Elwood R. "Pete" Quesada, IX Tactical Air Command. U.S. Army photograph, collection of the Dwight D. Eisenhower Presidential Library and Museum, courtesy of the U.S. National Park Service.

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Preface

U.S. post–Cold War military operations have witnessed a shift in the relative roles of ground power and air power in warfighting, but the joint warfighting potential of this shift is not being fully realized. This is the hypothesis of a larger report, *Learning Large Lessons: The Evolving Roles of Ground Power and Air Power in the Post–Cold War Era,* by David E. Johnson (MG-405-1-AF, 2007). This summary of that monograph contains an abbreviated discussion of four of the cases examined in the more-comprehensive study: Iraq (1991), Kosovo (1999), Afghanistan (2001), and Iraq (2003). It also incorporates modest changes from the larger monograph, based on suggestions made to the author since its publication. Key issues addressed are the dominant roles played by the services in the development of U.S. joint warfighting doctrine and concepts and the fact that warfighting success does not necessarily achieve a strategic political end-state that supports U.S. long-term interests. Specific recommendations include

- **Shaping the theater operational environment—strategically and operationally—should be an air component function.** Air power has proven to be capable of performing deep strike operations, a mission that the Army has long believed the Air Force could not or would not reliably perform. Furthermore, the organic systems the Army has to fight the deep battle—the AH-64 Apache helicopter and the Army Tactical Missile System (ATACMS)—are not as effective in that role as fixed-wing aircraft, although they have shown considerable value in other roles. Thus, the task of strategically and operationally shaping the the-

ater should be an air component function, and joint and service doctrines and programs should change accordingly.

- **The Army should focus more than it currently does on the central role of ground forces in achieving strategic objectives.** Despite the warfighting prowess of the U.S. military, its forces have been less effective across the full range of military operations, e.g., stability, security, transition, and reconstruction operations. This realm is largely and intrinsically ground-centric. While the Army is adapting in real time to the challenges beyond major combat operations in Afghanistan and Iraq, the strategic goals of these operations have not yet been realized. Given the effectiveness of air power in "deep operations,"[1] perhaps the time has come to assess whether the Army should be substantially altered to bolster its effectiveness in the all-important realm of realizing strategic objectives that go beyond the ability to maneuver and dominate in major operations. Resources for this redesign could come in part from existing or envisioned deep operations capabilities—from across all services—that air power can provide more effectively.

Much work remains to attain a truly joint American warfighting system, including unskewing the "lessons" from recent conflicts. Even more work is needed to adapt American warfighting prowess into capabilities to achieve strategic political objectives. Reform will be difficult, but it must proceed apace to ensure that the United States has the capacity to deal with the strategic realities of the 21st century.

The research reported here was sponsored by Dr. Christopher Bowie, Deputy Director, Air Force Strategic Planning, Deputy Chief of Staff for Plans and Programs, Headquarters U.S. Air Force (AF/

[1] Terms and definitions continually evolve in U.S. military doctrine and concepts. Throughout this study, various terms appear—deep operations, deep strike operations, shaping operations, etc.—to describe the use of fires beyond the range of the indirect fire systems organic to U.S. Army divisions (and brigade combat teams). The purpose is not to advocate or debate specific terms and definitions but, rather, to assess which systems and capabilities are most effective in providing fires and effects for the overall joint force effort throughout a theater of operations.

XPX). The work was conducted within the Strategy and Doctrine Program of RAND Project AIR FORCE as part of a fiscal-year 2004 study, "Fourteen Years of War: Identifying and Implementing Lessons from U.S. Military Operations Since the Cold War." The monograph should interest policymakers in the Department of Defense, the Joint Chiefs of Staff, the U.S. Joint Forces Command, and those in the armed services concerned with concept development, doctrine, and weapon system acquisition.

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Second, I deeply appreciate the contributions to the study from many individuals outside RAND, including Col John V. Allison (U.S. Air Force), COL Chelsea Chae (U.S. Army), Robert E. Everson, MG David Fastabend (U.S. Army), COL Gregory P. Gass (U.S. Army), LTC Michael Johnson (U.S. Army), COL Robert C. Johnson (U.S. Army), Gen Ronald E. Keys (U.S. Air Force) and members of his staff at Air Combat Command, Andrew F. Krepinevich, Brig Gen Michael Longoria (U.S. Air Force), BG Stephen D. Mundt (U.S. Army), Col Matthew D. Neuenswander (U.S. Air Force), LTG David H. Petraeus (U.S. Army), MG David C. Ralston (U.S. Army), Maj Gen Bentley B. Rayburn (U.S. Air Force, Ret.), COL Rickey E. Smith (U.S. Army), COL David Sutherland (U.S. Army), BG Robin Swan (U.S. Army), Barry Watts, Lt Gen Stephen G. Wood (U.S. Air

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Third, I want to thank the students and faculty who participated in seminars on the study at the U.S. Air Force School of Advanced Air and Space Studies and the U.S. Army Command and General Staff College. In accordance with their reputation, these individuals engaged in a vigorous and valuable debate with me about this study.

Fourth, the study was informed by the many thoughtful responses of participants at the Fall 2006 U.S. Air Force CORONA Conference, chaired by Secretary of the Air Force Michael W. Wynne and Air Force Chief of Staff Gen T. Michael Moseley. I also express my appreciation to General Moseley for including the first edition of the larger report, *Learning Large Lessons: The Evolving Roles of Ground Power and Air Power in the Post–Cold War Era,* (MG-405-AF, 2006), on the October 2006 Chief of Staff Air Force Reading List.

Finally, the study's reviewers—Adam Grissom, Francis G. Hoffman, David A. Ochmanek, and James T. Quinlivan—each provided thorough and very useful reviews.

The efforts of all these individuals contributed immeasurably to the final product that is this report. I owe them all an enormous debt of gratitude.

Abbreviations

AFDD	Air Force doctrine document
AFM	Air Force manual
AHB	attack helicopter battalion
AHR	attack helicopter regiment
AO	area of operations
ATACMS	Army Tactical Missile System
ATO	air tasking order
BAT	Brilliant Anti-Armor Submunition
BCT	brigade combat team
C4ISR	command, control, communications, computers, intelligence, surveillance, and reconnaissance
CAS	close air support
CENTCOM	U.S. Central Command
CFACC	Combined Forces Air Component Commander
CFLCC	combined forces land component commander
CJTF	combined joint task force
FCS	Future Combat System

FEBA	forward edge of the battle area
FM	field manual
FSCL	fire support coordination line
ISR	intelligence, surveillance, and reconnaissance
JFACC	joint force air component commander
JFC	joint force commander
JP	joint publication
MCDP	Marine Corps doctrinal publication
MOOTW	military operations other than war [obsolete]
NATO	North Atlantic Treaty Organization
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
RDT&E	research, development, test, and evaluation
SEAD	suppression of enemy air defenses
SOF	special operations forces
TRADOC	Training and Doctrine Command
TTPs	tactics, techniques, and procedures
UA	unit of action
UAV	unmanned aerial vehicle
UE	unit of employment
UNAAF	unified action armed forces
USAF	U.S. Air Force

CHAPTER ONE

Introduction

The U.S. Army and the U.S. Air Force are the services largely responsible for promulgating the relevant doctrines, creating effective organizations, and procuring equipment for the changing conflict environment in the domains of land and air. Yet they do not appear to be fully incorporating the lessons learned from post–Cold War operations. This document summarizes a larger monograph, *Learning Large Lessons: The Evolving Roles of Ground Power and Air Power in the Post–Cold War Era*, that explores the relationship between air and ground forces in the context of joint operations.[1] That monograph poses the hypothesis that post–Cold War operations have witnessed a shift in the roles of ground and air power in warfighting.[2] (Note that "warfighting" is not "conflict resolution," a point that will be addressed at the end of this document.) Thus, the joint warfighting potential of comprehensive ground-air integration is not being fully realized. Indeed, the Army and the Air Force seem to have viewed the conflicts of the post–Cold War period through lenses that favor their specific institutional imperatives.

[1] David E. Johnson, *Learning Large Lessons: The Evolving Roles of Ground Power and Air Power in the Post–Cold War Era*, Santa Monica, Calif.: RAND Corporation, MG-405-1-AF, 2007.

[2] Throughout this monograph, reference to *air power* is inclusive of *space* and *aerospace* power.

Study Scope and Methodology

Study Scope: The Range of Military Operations and Focused Learning

This monograph focuses on how the Army and Air Force have viewed four "war" cases during the post–Cold War era and what lessons have—or have not—been learned.[3]

The case assessments covers Army and Air Force lessons learned from conflicts in the post–Cold War period, despite the fact that all the cases under examination occurred subsequent to the passage of the Goldwater-Nichols Department of Defense Reorganization Act of 1986, which prompted the introduction of joint doctrine. In reality, joint warfighting doctrine is largely an amalgamation of service doctrines; it is subject to interpretation when executed by a regional combatant commander. Consequently, prevailing views about ground and air power are largely informed by the services, enabled by service capabilities, and influenced in application by the preferences of combatant commanders and their subordinates.

War cases have been isolated as the area of analysis because warfighting (major operations and campaigns) is the activity that largely influences the behavior of the services. This warfighting focus dominates, even though joint doctrine notes the requirement for the U.S. armed forces to be prepared to "meet various challenges, protect national interests, and achieve strategic goals in a variety of ways, depending on the nature of the strategic environment."[4]

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[3] The larger study that is the basis for this Executive Summary (Johnson, 2007) contained five case studies: Iraq (1991), Kosovo (1999), Bosnia (1995), Afghanistan (2001), and Iraq (2003). All but the Bosnia case are presented in abridged form in this monograph.

[4] U.S. Joint Chiefs of Staff, Joint Publication (JP) 3-0, *Joint Operations*, Washington, D.C., 2006, p. xxii. *Warfighting* is used throughout this study to connote major operations and campaigns involving large-scale combat (p. I-14). JP 3-0 (2006, p. xxii) notes:

> Major operations and campaigns are the most **complex** and require the greatest diligence in planning and execution due to the time, effort, and national resources committed. They normally will include some level of **offense and defense** (e.g., interdiction, maneuver, forcible entry, fire support, counterair, computer network defense, and base defense). [Emphasis in the original.]

Although the period since the end of the Cold War has witnessed a range of U.S. military operations, the Army and Air Force have focused their institutional efforts on the warfighting segment of the spectrum of conflict, reflecting these services' doctrine, organizations, and equipment. This segment is where the stakes are high: budget shares and service prestige. Consequently, it is also the focus of the "lesson learning" within military institutions and the locus of interservice tension. Table 1.1 shows the most notable conflicts in which the United States has been engaged since the end of the Cold War.

The conflicts in the table with an "X" in the right-hand column include large-scale combat operations for the Army or the Air Force. They were also conflicts whose "lessons" the Army and the Air Force have interpreted quite differently, thus causing tension between the two services. The other operations were limited and the means of addressing them created little Army–Air Force friction.

These "less than war" conflicts have also largely been treated as "lesser-included cases" by both services and have mainly provided "tactics, techniques, and procedures" to inform existing doctrines or negative lessons, as in the case of Somalia.

Study Methodology

This analysis is limited to identifying the responses of the ground-centric and the air-centric communities to what happened in these wars; the lessons learned; and, when appropriate, a more-balanced and integrated assessment of what actually happened in the wars. For the ground-centric and air-centric views, the approach used was to characterize what people near the extremes of each service were saying about

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JP 3-0 (2006, p. xxii) also notes the need to plan across the range of military operations:

> To reach the national strategic end state and conclude the operation/campaign successfully, **JFCs** [joint force commanders] **must integrate and synchronize stability operations—**missions, tasks, and activities to maintain or reestablish a safe and secure environment and provide essential governmental services, emergency infrastructure reconstruction, or humanitarian relief—**with offensive and defensive operations** within each major operation or campaign phase. **Planning for stability operations should begin when joint operation planning is initiated.** [Emphasis in the original.]

Table 1.1
Post–Cold War Conflict Cases

Case	Type	Ground Versus Air Tension
Panama	Strike (regime takedown)	
Iraq, 1991	Regional conventional war	X
Somalia	Humanitarian Assistance/Peace Enforcement	
Haiti	Strike/Peace Enforcement	
Rwanda	Humanitarian Assistance	
Bosnia	Limited conventional conflict Peace Enforcement	X
Kosovo	Limited conventional conflict Peace Enforcement	X
Afghanistan	Limited conventional conflict Peace enforcement Counterinsurgency Counterterrorism	X
Iraq, 2003	Regional conventional war Counterinsurgency Counterterrorism	X

NOTES: The typology in the "Type" column of this table is taken directly from the range of military operations specified in U.S. Joint Chiefs of Staff, Joint Publication (JP) 3-0, *Doctrine for Joint Operations*, 2001. This typology changed with the September 2006 publication of U.S. Joint Chiefs of Staff, JP 3-0, *Joint Operations*, which on page iii discontinues the "use of the term and acronym 'military operations other than war (MOOTW).'" The new JP 3-0 also delineates the types of military operations: Major Operations; Homeland Defense; Civil Support; Strikes; Raids; Show of Force; Enforcement of Sanctions; Protection of Shipping; Freedom of Navigation; Peace Operations; Support to Insurgency, Counterinsurgency Operations, Combating Terrorism, Noncombatant Evacuation Operations; Recovery Operations; Consequence Management; Foreign Humanitarian Assistance; Nation Assistance; Arms Control and Disarmament; and Routine, Recurring Military Activities. This study retains the term *MOOTW* in all but the final chapter, because it was the organizing doctrinal construct for the range of military operations for the conflicts described in this study. For a discussion of the types of operations in the range of military operations, and their implications for conventional coercion, see David E. Johnson, Karl Mueller, and William H. Taft, V, *Conventional Coercion Across the Spectrum of Operations: The Utility of U.S. Military Forces in the Emerging Security Environment*, Santa Monica, Calif.: RAND Corporation, MR-1494-A, 2002.

these cases, so long as the speakers were within the bounds of what the institution considered to be mainstream. For the integrated assessment of the conflicts, more-objective academic and public sources were used. The analysis focused on answering the following questions:

- What are the causes of interservice tension at the war end of the range of military operations?
- Are Army and Air Force lessons learned being shaped by parochial interests that are inhibiting true learning and improvements in joint warfighting capabilities?
- Are single-service doctrinal paradigms sufficient to capture these lessons, or do the lessons call for a fundamental rethinking and shift of the roles of air and ground power in warfighting?
- What would be the implications of such a shift in the realms of joint doctrine, service roles and missions, service programs, and service cultures?

Organization of This Monograph

The next chapter briefly examines the historical Army–Air Force relationship. The following four chapters (Chapters Three through Six) assess four wars: Iraq (1991), Kosovo (1999), Afghanistan (2001), and Iraq (2003). A concluding chapter offers recommendations for approaches to resolving Army–Air Force warfighting tensions and thoughts about the need for broader joint and service doctrine for conflict resolution.

CHAPTER TWO

The Relationship Between U.S. Ground Power and Air Power Before the End of the Cold War

Historically, tension has existed between the Army and the Air Force over the relative roles of ground and air power. The origins of this tension date back to the period between the two World Wars, when the Air Force was a branch within the Army. Throughout the interwar period, U.S. Army airmen fought to establish air power as a decisive instrument and to gain their independence from what they considered a conservative Army hierarchy, incapable of seeing air power as anything other than long-range artillery relegated to supporting the ground effort. The views of the airmen were not without basis or bias.

During the 1920s and 1930s, Army leaders focused on incorporating the lessons of World War I into Army doctrine and organization. They viewed ground combat as the decisive arena of warfare and believed that the "mission of the infantry is the general mission of the entire force."[1] And the mission of the Army was clear: "The ultimate objective of all military operations is the destruction of the enemy's armed forces by battle. Decisive defeat in battle breaks the enemy's will to war and forces him to sue for peace."[2] In the minds of the ground

[1] U.S. War Department, *Field Service Regulations, United States Army, 1923*, Washington, D.C.: U.S. Government Printing Office, 1924, p. 11. This version of the Army's *Field Service Regulations* was in effect until 1939. For a thoughtful discussion of the development of U.S. Army doctrine between the World Wars, see William O. Odom, *After the Trenches: The Transformation of U.S. Army Doctrine, 1918–1939*, College Station: Texas A&M University Press, 1999.

[2] Odom (1999), p. 77.

Army leadership, given these fundamental doctrinal tenets, "the other arms and services existed only to aid the infantry."[3]

In the aftermath of the Great War, the Army embraced a key principle that has guided its fundamental institutional decisions to this day: An Army designed for the worst case can handle all other types of operations as lesser-included cases. The Army codified this tenet in its *Field Service Regulations*, which stated that the Army would focus on preparing to fight "an opponent organized for war on modern principles and equipped with all the means of modern war," because "an army capable of waging successful war under these conditions will prove adequate to any less grave emergency."[4]

The Army air component's doctrine evolved along radically different lines from those of the ground forces. During the interwar period, the Army Air Corps developed a theory of strategic bombing that focused not on enemy armies but on an opposing nation's ability to wage war. It saw "air warfare [a]s . . . a method of destroying the enemy's ability to wage war. It is primarily a means of striking a major blow toward winning a war, rather than a direct auxiliary to surface warfare."[5]

When the United States entered World War II, General George C. Marshall, the Army Chief of Staff, reorganized the Army into three components: Army Ground Forces, Army Air Forces, and Army Service Forces. This new arrangement implicitly recognized the autonomy,

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[3] David E. Johnson, *Fast Tanks and Heavy Bombers: Innovation in the U.S. Army, 1917–1945*, Ithaca, N.Y.: Cornell University Press, 1998, p. 96.

[4] U.S. War Department, *Field Service Regulations* (1924), p. iii. See also U.S. Department of the Army, Field Manual (FM) 3-0, *Operations*, 2001, pp. vii, 1-3. The resilience of this notion of the lesser-included case is reflected in current Army doctrine, which states the following (pp. vii and 1-3):

> The doctrine holds warfighting as the Army's primary focus and recognizes that the ability of Army forces to dominate land warfare also provides the ability to dominate any situation in military operations other than war. . . . The Army's warfighting focus produces a full spectrum force that meets the needs of joint force commanders (JFCs) in war, conflict, and peace.

[5] Brigadier General Haywood S. Hansell, "The Development of the United States Concept of Bombardment Operations," lecture presented at the Air War College, February 16, 1951 (published by Maxwell Air Force Base, Ala.: Airpower Research Institute), p. 7.

if not the independence, of the Army Air Forces. Indeed, in 1943 the War Department published FM 100-2, *Command and Employment of Air Power*, which explicitly recognized the new relationship between Army ground and air forces: "LAND POWER AND AIR POWER ARE CO-EQUAL AND INTERDEPENDENT FORCES; NEITHER IS AN AUXILIARY OF THE OTHER."[6]

What developed during and after World War II were two institutions with fundamentally different views of warfare. The Army was convinced that conventional ground forces were the critical war-winning factor; the Air Force believed that air power was the key to victory. In World War II and in subsequent major conflicts, each service largely fought independently, although the Air Force did provide air support to the Army.

This is not to say that the Army and the Air Force did not effectively integrate their capabilities in the past. Nevertheless, the most effective "systems" of cooperation were generally developed in the field—not by the institutions responsible for training, organizing, or equipping forces—because the need was so great. Perhaps the most compelling example of this development of closely integrated air-ground capabilities can be found in the experience of General Omar Bradley's 12th Army Group in Europe during World War II. A photograph of several of the ground and air commanders responsible for this integration appears on the cover of this monograph. Their example is instructive:

> A postwar review of operations in the European theater asserted that the Army's failure to develop air-ground doctrine meant that means of cooperation had to be invented extemporaneously in the field. In the combat theaters, ground and air commanders were forced to create ad hoc procedures for tactical air power because their superiors provided no centralized direction. . . . The final after-action report of General Omar Bradley's 12th Army Group emphasized that "the air-armor team is a most powerful combination in the breakthrough and exploitation. . . . The use of this coordinated force, in combat, should be habitual." Thus,

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[6] U.S. War Department, FM 100-2, *Command and Employment of Air Power*, Washington, D.C.: U.S. Government Printing Office, 1943, p. 1. Capitalization in the original.

> although air support of ground operations played an important role in the Allied drive into Germany and procedures were continually improved, the initiative came from below. In the combat zones, where Americans were dying, intraservice agendas were discarded and field expedients were devised to overcome institutional agendas.[7]

At the risk of oversimplification, the Army fought tactical battles to the range of its organic artillery. The Air Force focused on strategic and interdiction efforts while providing tactical close air support to ground forces.

In the aftermath of the Vietnam War, the focus of the U.S. military shifted to the North Atlantic Treaty Organization (NATO) and the defense of Western Europe from attack by the Warsaw Pact. For the Army, in particular, the change in focus was fundamental, because it structured itself for war with the Warsaw Pact. The Air Force also looked to Europe and kept "its eyes fixed . . . on grand strategic warfare against enemies with similar industrial and military institutions."[8]

The post-Vietnam era also witnessed a period of Army–Air Force cooperation that was unprecedented and focused on dealing with the multi-echeloned threat that Warsaw Pact forces posed to NATO. Army and Air Force doctrines of the period reflect a new level of interservice collaboration, but this cooperation only went so far. The 1986 version of the Army's FM 100-5, *Operations*, was the ultimate expression of the Army's AirLand Battle concepts. As do all post-Vietnam Army *Operations* manuals, this manual focuses on warfighting: "AirLand Battle doctrine focuses primarily on mid- to high-intensity warfare." Nevertheless, it kept faith with the 1923 *Field Service Regulations*, in that it implied that mastering the most difficult NATO case prepared the

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[7] Johnson (1998), p. 226; see U.S. 12th Army Group, *Antiaircraft Artillery, Armored Artillery, Chemical Warfare, and Signal Sections*, Vol. 11, *12th Army Group Report of Operations (Final After Action Report)*, n.p., 1945, p. 61, for 12th Army Group report quote. World War II in Europe was perhaps the last time the United States fought an opponent of such competence that operational success required the integration of cross-service capabilities.

[8] Earl H. Tilford, Jr., "Air Power in Vietnam: The Hubris of Power," in Lawrence E. Grinter and Peter M. Dunn, eds., *The American War in Vietnam: Lessons, Legacies, and Implications for Future Conflicts*, Westport, Conn.: Greenwood, 1987, p. 81.

Army for any lesser-included cases.[9] The 1986 manual also acknowledges the importance of strategic air attack "directed against the heartland." Nevertheless, the doctrine stressed the preeminence of the enemy's ground forces.[10]

The March 1984 version of Air Force Manual 1-1 (AFM 1-1), *Basic Aerospace Doctrine of the United States Air Force*, was the final manual of basic doctrine published by the Air Force before the end of the Cold War. The manual notes that, "since 1943, several fundamental beliefs have remained imbedded in Air Force doctrine":

> Airpower can exploit speed, range, and flexibility, better than land and seas [*sic*] forces, and therefore, it must be allowed to operate independently of these forces. These characteristics are most fully realized when air is controlled centrally but executed decentrally [*sic*].[11]

The manual also notes the basic roles of ground and air power, with land forces focusing on the land battle and air forces on the air conflict, but noting that air power could be decisive.[12]

Thus, although both the Army and the Air Force recognized a degree of mutual interdependence, each clung tenaciously to the institutional imperative that its service was decisive in winning wars. Interservice collaboration, however, began to unravel as the Cold War came to a close.

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[9] U.S. Department of the Army, FM 100-5, *Operations,* Washington, D.C., 1986, p. 6.

[10] U.S. Department of the Army, FM 100-5 (1986), p. 47.

[11] U.S. Department of the Air Force, AFM 1-1, *Basic Aerospace Doctrine of the United States Air Force*, Washington, D.C., 1984, p. A-6. Appendix A of this manual, "Evolution of Basic Doctrine," contains a concise and useful discussion of the development of U.S. Air Force doctrine.

[12] U.S. Department of the Air Force, AFM 1-1 (1984), p. 1-3. See also Glenn A. Kent and David A. Ochmanek, *Defining the Role of Airpower in Joint Missions*, Santa Monica, Calif.: RAND Corporation, MR-927-AF, 1998, p. 9, in which the authors note that "This formulation constrains air power to, at most, a subsidiary role in defeating enemy surface forces."

Historian Harold R. Winton attributes the decline of Army–Air Force relations to two reasons.[13] First, as the Army developed its AirLand Battle concepts, it focused on the operational level of war.[14] In so doing, it began to extend the depth of the battlespace it wanted to control to take advantage of the capabilities of the long-range weapons it was fielding. This extension inevitably created friction with airmen, who saw interdiction of enemy forces in rear areas as a central role of air power. The second reason was the publication of Colonel John Warden's *The Air Campaign*, which posited, "The air campaign may be the primary or supporting effort in a theater."[15] Warden later refined his ideas and developed a targeting construct that focused on targeting "in decreasing order of significance . . . leadership, organic essentials, infrastructure, population, and fielded forces." Thus, Warden served as a catalyst for the emerging view within the Air Force that "the application of air power could, and perhaps even should, be thought of as being independent of ground operations."[16]

The end of the Cold War dissolved the unifying effect of NATO defense, and the Army and the Air Force had two points of contention: "the amount of influence that senior ground commanders should have over Air Force interdiction operations, and the mechanisms for coordinating the effects of fixed-wing air and extended-range Army systems."[17] Both services had doctrines that served as the basis for organizing, equipping, and training their own forces, and these doc-

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[13] Harold R. Winton, "Partnership and Tension: The Army and the Air Force Between Vietnam and Desert Shield," *Parameters*, Spring 1996, p. 11 (online edition).

[14] See U.S. Department of the Army, FM 100-5, *Operations,* Washington, D.C., 1982, pp. 2–3. This manual promulgated AirLand Battle and defined the operational level of war.

[15] John A. Warden III, *The Air Campaign: Planning for Combat*, Fort McNair, D.C.: National Defense University Press, 1988, p. 153.

[16] Winton (1996), p. 10.

[17] Winton (1996), p. 11. See also Richard G. Davis, *The 31 Initiatives: A Study in Air Force–Army Cooperation*, Washington, D.C.: Office of Air Force History, 1987. The peacetime Army–Air Force cooperation in preparing to defend NATO seems to have been an anomaly. The normal state of the peacetime relationship is one in which "the services seem often to fall back on their broader agenda for preparation for future war" (p. v).

trines provided a framework within which lessons from future conflicts would be learned.

CHAPTER THREE

Iraq, 1991

Background

Operation Desert Storm reignited the debate about the relative roles of ground and air power, which had waned during the final years of the Cold War. As the *Gulf War Air Power Survey Summary Report* presciently noted, "Whether this remarkable outcome presages a new relationship between air forces and ground forces will, no doubt, be debated for years to come."[1]

Air power was a key to all four phases of the campaign. Additionally, for the first time in U.S. warfighting history, a Joint Force Air Component Commander (JFACC) was designated and responsible for "planning, coordination, allocation, and tasking of apportioned sorties and capabilities" for the combatant commander.[2] The air campaign began on January 17, 1991. Iraqi forces were subjected to 38 days of bombardment before the start of the Coalition counteroffensive. Within 100 hours of the inception of ground operations, the war was over.

[1] Thomas A. Keaney and Eliot A. Cohen, *Gulf War Air Power Survey Summary Report*, Washington, D.C.: Government Printing Office, 1993, p. 246.

[2] Keaney and Cohen (1993), p. 179.

Lessons: The Ground-Centric View

The Army's official history of the war—*Certain Victory: The U.S. Army in the Gulf War*—captures in several sentences the ground perspective on "lessons learned":

> Iraq's operational center of gravity, the Republican Guard, and to a lesser extent, the heavy divisions of the regular army, remained a viable fighting force in spite of significant physical damage caused by air attack because their will to fight was not broken. Only by vanquishing an enemy and displacing him on the ground can a military force break the enemy's will and ensure ultimate victory.[3]

Given this "truth," the report went on to note the principal lesson of the war: "Maintaining an immediately deployable capability for decisive land combat to end a conventional conflict successfully is the single most enduring imperative of the Gulf War." Summing up, *Certain Victory* stressed that this "was a lesson that has been repeated with unbroken fidelity through all of America's wars."[4]

Lessons: The Air-Centric View

An article by James A. Mowbray, an Air War College professor, succinctly captures the air-centric perspective on the Gulf War:

> The Gulf War brought to the fore the technology, tactics, techniques, and operational methods on which the Air Force had been working since the Vietnam War. Precision guided munitions, precision navigation systems like the [G]lobal [P]ositioning [S]ystem (GPS), and day-night all-weather operations allowed the Air Force to fly, fight, and win in the face of the worst weather in

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[3] Robert H. Scales, Terry L. Johnson, and Thomas P. Odom, *Certain Victory: The US Army in the Gulf War*, Washington, D.C.: Office of the Chief of Staff United States Army, 1993, pp. 359–360.

[4] Scales, Johnson, and Odom (1993).

> the Middle East in more than a decade. That technology helped to win the fastest, lowest casualty, most devastatingly destructive one-sided war in recorded history. Air Force capabilities had come of age.[5]

Others, however, were even more pointed in their view of the contribution of air power to victory in the Gulf. Air Force Chief of Staff General Merrill A. McPeak claimed, "This is the first time in history that a field army has been defeated by air power."[6]

Areas of Ground-Air Tension

The big debate emerging from the first Gulf War was over which service had won the conflict. For one to be able to demonstrate that it had provided the decisive element would bolster its claims in the pursuit of new systems and the budget to acquire them. Two lesser issues emerged that would provoke spirited discussion in the joint arena: the JFACC and who owns the battlespace.

Who Won the War?

Ground-air tension over the lessons of the Gulf War was inevitable, given the polarity of the views of the two camps. The principal issue was the role of ground power versus that of air power in a war. Ground power advocates, as noted earlier in this chapter, were adamant that "boots on the ground" were the decisive factor; air power was a supporting, albeit important, capability subordinate to the decisive ground campaign. If the Army's assertions were correct, then it logically fol-

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[5] James A. Mowbray, "Air Force Doctrine Problems 1926–Present," *Airpower Journal*, Winter 1995, p. 12 (online edition).

[6] Mark Clodfelter, "Of Demons, Storms, and Thunder: A Preliminary Look at Vietnam's Impact on the Persian Gulf Air Campaign," *Airpower Journal*, Winter 1991, p. 17, quoted in James A. Winnefeld, Preston Niblack, and Dana J. Johnson, A *League of Airmen: U.S. Air Power in the Gulf War*, Santa Monica, Calif.: RAND Corporation, MR-343-A, 1994, p. 277.

lowed that "the most legitimate role for air power is in support of land warfare."[7]

Air power advocates were essentially of two minds before, during, and after the Gulf War. One group believed that concentrating air attacks on the enemy's "strategic centers of gravity" (e.g., leadership, command and control, and economic infrastructure) would induce "paralysis" in the enemy state and render its military forces impotent and irrelevant. A second group believed that, while attacks on targets such as these could be useful in disrupting the enemy and, perhaps, providing some coercive leverage, airpower had to contribute directly to defeating the enemy's fielded forces as part of a joint campaign. The first group was the minority element and was overruled in the conduct of the actual air campaign during Desert Storm, and yet, strangely, they emerged as the more influential group within the Air Force in the war's aftermath.

Still, it is important to note that there is a middle ground that is probably closer to reality in explaining the outcome of the war than that proffered by either the ground or air advocates. An early appraisal was in the 1993 book *Desert Storm: The Gulf War and What We Learned*. This volume's authors wrote

> Even if it is not true, as USAF general Merrill McPeak suggested, that the air campaign against Iraq was the first time in history that a field army was defeated by air power, it is widely agreed that in this case it created the conditions for a rapid, low-casualty ground phase.[8]

The JFACC

As already noted, the Gulf War marked the first operational employment of a JFACC, who was responsible for running the air war, including "planning, coordinating, allocating, and assigning personnel to theater air operations derived from General Norman Schwarzkopf's

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[7] Richard P. Hallion, *Storm Over Iraq: Air Power and the Gulf War*, Washington, D.C.: Smithsonian Institution Press, 1992, p. 42.

[8] Michael J. Mazarr, Don M. Snider, and James A. Blackwell, Jr., *Desert Storm: The Gulf War and What We Learned*, Boulder, Colo.: Westview Press, 1993, p. 124.

apportionment decisions."[9] The JFACC "exercised his authority through the air tasking order (ATO), which provided detailed directions—with some exceptions—for all Coalition flight operations."[10]

The ATO supported an air campaign that was, in the view of many Army, Navy, and Marine officers, an Air Force–dominated process that reflected Air Force conceptions about the appropriate use of air power.[11] The air planners designed an air campaign that reflected their doctrine of "centralized control of air power and attacks against targets critical to the overall campaign."[12] The other U.S. service components did not believe that the system addressed all their requirements, and they believed that it forced "Air Force approaches" on them.[13]

Who Owns the Battlespace?

The tension between ground and air officers was largely about who would have authority over the theater battlespace. This tension was perhaps most apparent in the dispute over authorities vested in a specific fire support coordinating measure—the fire support coordination line (FSCL). In Army doctrine, the FSCL is a "permissive fire support measure" because it is intended "to allow the corps and its subordinate and supporting units (*such as the Air Force*) to expeditiously attack targets of opportunity beyond the FSCL."[14] Furthermore, Army doctrine speci-

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[9] Thomas A. Keaney and Eliot A. Cohen, *Revolution in Warfare? Air Power in the Persian Gulf*, Annapolis, Md.: Naval Institute Press, 1995, pp. 4–5.

[10] Keaney and Cohen (1995), p. 5. The ATO did not include Army rotary-wing aircraft.

[11] Michael R. Gordon and Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf*, Boston: Little, Brown and Company, 1995, p. 472.

[12] Gordon and Trainor (1995), p. 472.

[13] U.S. Congress, House, Committee on Armed Services, *Defense for a New Era: Lessons of the Persian Gulf War*, Washington, D.C.: Government Printing Office, 1992, p. 9.

[14] U.S. Department of the Army, FM 6-20-30, "Annex F—Fire Support Coordinating Measures," in *Tactics, Techniques, and Procedures for Fire Support for Corps and Division Operations*, Washington, D.C., October 18, 1989, p. 3 (online edition). Emphasis added.

fies that "the FSCL . . . should be located beyond the area in which the corps intends to shape its deep operations fight."[15]

For the Army, the FSCL facilitated control of its area of operations (AO) and the use of its organic weapons to execute deep battle. For the Air Force, the FSCL, placed deep in a corps AO, restricted its ability to attack targets short of the FSCL that the Army was not capable of attacking effectively.

The Institutionalization of "Lessons" from the Gulf War

The Gulf War was a seminal experience for U.S. armed forces. Coming as it did near the collapse of both the Soviet Union and the intellectual framework that the Cold War had provided for U.S. warfighting strategy, the Gulf War was the first font of "lessons" for the way forward in a post–Cold War world. In the aftermath of the war, the services, although nodding in the direction of jointness, largely looked to the lessons of the Gulf War to improve their own institutional positions.

Immediate Ground-Centric Gulf War Lessons

In 1993, the Army published a new edition of FM 100-5, *Operations*. The manual, while recognizing the "greater ambiguity and uncertainty" and "wider variety of threats" in the post–Cold War era and the reality of joint operations,[16] still staked out the Army's traditional turf as "the nation's historically proven decisive military force." Although it noted requirements for other missions, such as stability operations, it maintained that the Army's primacy resulted from its unique ability for prolonged land combat.[17]

Thus, in many ways, the Gulf War affirmed in the minds of senior Army leaders the correctness of the course the Army had pursued in rebuilding the institution since the end of the Vietnam War. In the

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[15] U.S. Department of the Army, FM 6-20-30, "Annex F—Fire Support Coordinating Measures" (1989), pp. 4–5.

[16] U.S. Department of the Army, FM 100-5, *Operations*, Washington, D.C., 1993, p. 1-1.

[17] U.S. Department of the Army, FM 100-5 (1993), pp. 1-4 to 1-5.

Army's view, it had the right doctrine, equipment, and formations and still maintained its preeminence as the nation's decisive, war-winning service. And because it relied on the other services for strategic mobility and air support, the Army came to "champion jointness" so long as its "central role" was preserved.[18] It continued to view itself as the supported service.

Immediate Air-Centric Gulf War Lessons

The Air Force also looked to the Gulf War for lessons for the future and, not surprisingly, came away with a different assessment of the relative roles of ground and air power. The Air Force had proven itself to be an effective, day-or-night force across the theater of operations. Given its success in the Gulf War, the Air Force focused increasingly on how to exploit the potential of air power in warfare and how to win a greater role for air power in joint operations.

The Failure to Create Joint Doctrinal Solutions

Given that the Army and the Air Force each saw themselves as the decisive component in war and that both wanted control of the deep battle, inevitable tension between the two services resulted. Joint doctrine contained in JP 3-0, *Doctrine for Joint Operations*, in February 1995 did nothing to resolve service tensions. Indeed, it may have exacerbated them.

The Continuing Debate About Who Owns the Battlespace

JP 3-0 addressed the ownership of the battlespace, identifying the control and coordinating measures that JFCs would employ to "*facilitate effective joint operations*." These measures included "boundaries, phase lines, objectives, coordinating altitudes to deconflict air operations, air defense areas, amphibious objective areas, submarine operating patrol

[18] Gordon and Trainor (1995), p. 473.

areas, and minefields."[19] The two measures that still generated ground-air tensions were boundaries and the FSCL.

Boundaries were clearly focused on surface combat, because the manual stated "JFCs may use *lateral*, *rear*, and *forward* boundaries to define AOs for land and naval forces." Furthermore, "Such areas are sized, shaped, and positioned to enable land or naval force commanders to accomplish their mission while protecting deployed forces." JP 3-0 defined the FSCLs "as permissive fire support coordinating measures." Their placement was, however, still the prerogative of the ground commander.[20]

There were those in the Air Force who felt that joint doctrine, particularly that contained in JP 3-0, had a surface maneuver bias.[21] A principal concern was that joint doctrine elaborated by JP 3-0 did not view air power as a maneuver force; this role was restricted to land and naval forces. This restriction went to the fundamental issue of battlespace control, because, inside the maneuver boundaries, that commander was the supported commander who determines what happens with all military assets.

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[19] U.S. Joint Chiefs of Staff, JP 3-0, *Doctrine for Joint Operations*, Washington, D.C., 1995, p. III-33. Emphasis in the original.

[20] U.S. Joint Chiefs of Staff, JP 3-0 (1995), pp. III-33, III-34.

[21] Carl R. Pivarsky, Jr., *Airpower in the Context of a Dysfunctional Joint Doctrine*, Maxwell Air Force Base, Ala.: Air War College, Maxwell Paper No. 7, 1997.

CHAPTER FOUR

Kosovo, 1999

Background

On March 24, 1999, NATO began Operation Allied Force to compel Slobodan Milosevic, president of Yugoslavia, to end the human-rights abuses Serbs were committing against ethnic Albanians in the Serbian province of Kosovo. Operation Allied Force ended on June 9, following a 78-day campaign, when Milosevic met NATO's demands and Serbian forces began withdrawing from Kosovo.[1]

There were, however, substantial difficulties in prosecuting Allied Force. To begin with, the initial NATO plan assumed that Milosevic would accede to NATO demands following a two- to three-day air power demonstration focused on military targets. Essentially, NATO planners expected "a reprise of Deliberate Force" and that Milosevic would "fold quickly, as he had in 1995 [in Bosnia]."[2] This was a serious strategic miscalculation that failed to recognize the political and psychological importance of Kosovo to Milosevic and the Serbs.

When Milosevic did not give up after the initial days of the air campaign, figuring out what to do next brought General Wesley K. Clark, the Supreme Allied Commander, Europe, and his air component commander, Lieutenant General Michael Short, into conflict. General Clark wanted to use air power to attack Serb ground forces in

[1] Benjamin S. Lambeth, *NATO's Air War for Kosovo: A Strategic and Operational Assessment*, Santa Monica, Calif.: RAND Corporation, MR-1365-AF, 2001, p. v.

[2] Robert C. Owen, *Deliberate Force: A Case Study in Effective Air Campaigning*, Maxwell Air Force Base, Ala.: Air University Press, 2000, pp. 68–69.

Kosovo, and they became his top priority.[3] General Short was equally convinced that the appropriate use of "air power would be to pay little heed to dispersed Serbian forces in Kosovo and to concentrate instead on infrastructure targets in and around Belgrade, including key electrical power plants and government ministries."[4]

In the end, NATO continued to escalate the air campaign and did eventually hit targets in Belgrade. Milosevic acceded to NATO demands. The shooting war was over, but, as after Desert Storm, the "who won the war" debate was just beginning.

Ground-Centric View

General Clark, in his post-retirement memoirs, captured the essence of the ground perspective on why Milosevic quit when he did: "Planning and preparations for ground intervention were well under way by the end of the campaign, and I am convinced that this, in particular, pushed Milosevic to concede."[5] Part of Clark's preparations included deploying Task Force Hawk, consisting of 24 AH-64 Apache attack helicopters, a corps headquarters, and a ground brigade combat team. The Apaches in Task Force Hawk were never employed, but others echoed General's Clark's sentiment.[6]

The most important lesson the Army learned from Allied Force was that it had to change. Task Force Hawk demonstrated "how little the U.S. Army, by its own leadership's candid admission, had done since Desert Storm to get to an emergent theater of operations rapidly and with sufficient forces to offer a credible combat presence."[7] To

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[3] Wesley K. Clark, *Waging Modern War*, New York: Public Affairs, 2001, p. 241.

[4] Lambeth (2001), p. xix

[5] Clark (2001), p. 425.

[6] Earl H. Tilford, Jr., "Operation Allied Force and the Role of Air Power," *Parameters*, Winter 1999–2000.

[7] Lambeth (2001), p. 156.

move Task Force Hawk to its location at an airfield in Rinas, Albania, required 550 C-17 sorties.[8]

Soon after taking office, the Army's new chief of staff, General Eric K. Shinseki, hinted that changes were in store for the Army. He admitted, "Our heavy forces are too heavy and our light forces lack staying power. Heavy forces must be more strategically deployable and more agile with a smaller logistical footprint, and light forces must be more lethal, survivable, and tactically mobile."[9] On October 12, 1999, the Army leadership announced a vision to transform the Army "into a force strategically responsive and dominant at every point on the spectrum of conflict."[10]

Rapid deployment of highly capable Objective Force [later Future Force] units, using the medium weight Future Combat System (FCS), was central to the new Army vision. Survivability and lethality for the FCS-equipped units would come from vastly improved situational awareness, which would give Objective Force units the capability to "*see first, understand first, act first and finish decisively as the means to tactical success*."[11] And the Army's deployment goals were ambitious: "a brigade combat team anywhere in the world in 96 hours after liftoff, a division on the ground in 120 hours, and five divisions in theater in 30 days."[12] It would appear that the lesson the Army drew from Kosovo was that it needed to deploy forces faster.

With General Shinseki's arrival as chief of staff, the Army embarked on the ambitious transformation strategy, whose fundamental premise was the conviction that ground combat remained the deci-

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8 Lambeth (2001), p. 156.

9 "Shinseki Hints at Restructuring, Aggressive Changes for the Army," *Inside the Army*, June 28, 1999, p. 1, cited in Michael G. Vickers, "Revolution Deferred: Kosovo and the Transformation of War," in Andrew J. Bacevich and Eliot A. Cohen, eds., *War Over Kosovo: Politics and Strategy in a Global Age*, New York: Columbia University Press, 2001, p. 157.

10 U.S. Department of the Army, *Concepts for the Objective Force*, Washington, D.C., 2001a, p. ii.

11 U.S. Department of the Army (2001a), p. 6. Emphasis in original.

12 U.S. Department of the Army (2001a), p. 9.

sive element in war. General Shinseki also challenged the notion that Kosovo heralded an emerging air-centric American way of war:

> For some opponents, mere punishment from afar is not enough. With these adversaries, the only way to guarantee victory is to put our boots on his ground, impose ourselves on his territory, and destroy him in his sanctuaries. . . . This is the foundation of decisiveness.[13]

The 2001 version of the Army's *Operations* FM reflected Shinseki's conviction that the Army was still central to winning America's wars:

> In war, Army forces form the nucleus of the joint force land component—imposing the nation's will on the enemy and causing his collapse. . . . Army forces defeat the enemy, end the conflict on terms that achieve national objectives, and establish self-sustaining postconflict stability.[14]

Future contingencies would soon test the Army's emerging concepts and its views about its role in winning the nation's wars.

Air-Centric View

For the Air Force as an institution, the lessons focused mainly on understanding how Allied Force could have been better executed. Thus, Air Force lessons were generally in two categories—those about the appro-

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[13] U.S. Department of the Army (2001a), p. v. See also Huba Wass de Czege, "The Continuing Necessity of Ground Combat in Modern War," *Army Magazine*, September 2000, pp. 8–12. In this article (p. 11), the author asserted that if the Army had been transformed to the Objective Force before Allied Force,

> *The incursion of the Serb Army into Kosovo could have been preempted before the genocide began*. . . . One or two objective force divisions could have been flown into Kosovo to block the entry of most of the Serbian forces. They would have used organic aircraft with enough range to fly into Kosovo from at least beyond the Adriatic Sea. [Emphasis in the original]

[14] U.S. Department of the Army, FM 3-0, *Operations* (2001b), p. 1-3.

priate use of air power and those about technical and procedural ways for improving performance.

The Appropriate Use of Air Power

Airmen shared a broad conviction that the air war was not properly conducted. Lieutenant General Michael C. Short, the Combined Forces Air Component Commander (CFACC) during Allied Force, thought that the initial bombing demonstration was doomed to failure. Instead, he believed a punishment campaign was the correct approach. Although he understood the political constraints, he believed that "we were constrained from conducting an air campaign as professional airmen would have wanted to conduct it."[15]

As the air war gradually escalated in the face of Milosevic's intransigence, General Short eventually was able to strike strategic targets in Serbia. In the opinion of General Michael E. Ryan, Air Force Chief of Staff, Milosevic quit because air power had brought the war home to Serbia. General Ryan also stressed that he did not believe that air power could have stopped the atrocities in Kosovo.[16]

Improving Air Power Performance

Allied Force showed that air power had made significant strides since the Gulf War in terms of precision munitions, including the first use of the Joint Direct Attack Munition, which gave American air power a truly all-weather, day-or-night precision-attack capability.[17] In the realm of intelligence, surveillance, and reconnaissance (ISR), Allied Force witnessed the first large-scale use of unmanned aerial vehicles (UAVs) with near-real-time sensors that provided surveillance in defended areas without putting aircrews at risk. That said, Coalition

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[15] Paul C. Strickland, "USAF Aerospace-Power Doctrine: Decisive or Coercive?" *Aerospace Power Journal*, Fall 2000, p. 3 (online edition).

[16] William M. Arkin, "Operation Allied Force," in Bacevich and Cohen, *War Over Kosovo* (2001), p. 27.

[17] U.S. Department of Defense, "Joint Statement on the Kosovo After Action Review," October 14, 1999, p. 12 (online edition).

ISR capabilities were unable to target Serbian ground forces dispersed throughout Kosovo's complex terrain.[18]

The Air Force's leadership emerged from the experience of Operation Allied Force with a determination to improve the service's performance in two major areas: First, they were determined that future air operations centers would be staffed by airmen who were better trained and better prepared than their predecessors to develop and execute a large-scale, complex air operation. Second, they were determined to streamline and improve the integration of sensors, controllers, and shooters so that air forces could become more effective in prosecuting attacks on small but high-value mobile targets.[19]

Areas of Ground-Air Tension

Allied Force showed the persistence of the clear schism between ground- and air-centric perspectives on warfighting. Nowhere was this clearer than in the perspectives of Generals Clark and Short. General Clark believed that Milosevic's forces in the field, particularly the Serbian Third Army, were the top priority. General Short, as already noted, favored a punishment campaign inside Serbia, "focused on the positive military objective of defeating Serbia's will and ability to fight." General Short was advocating an evolving concept known as "effects-based targeting," which he described after Allied Force:

> Effects-based is when you take down the electrical grid and to do that a sophisticated target analysis tells us to get the desired

[18] U.S. Army AH-64 Apache helicopters would have faced the same challenge. The Kosovo experience suggests that deep operations, by any service, may have difficulty targeting a dispersed adversary, particularly in complex terrain.

[19] Interview by RAND research team with General John P. Jumper (Commander, U.S. Air Forces Europe during Operation Allied Force), at Ramstein Air Base, Germany, June 1999. For more on General Jumper's views regarding attacks on fleeting targets, see John Jumper, "Testimony to the Military Readiness Subcommittee, House Armed Services Committee," Washington, D.C., October 26, 1999.

> effects measured in days, hours, weeks or months, we have to hit these critical nodes in his network. You go after that effect.[20]

In the aftermath of Allied Force, the debate over why Milosevic capitulated to NATO's demands ranged widely. In general, the arguments centered on whether ground attack (in the form of the Kosovo Liberation Army offensive or a potential NATO invasion) or strategic air attack was the war-winning factor. Perhaps the most cogent argument is that offered by Stephen T. Hosmer in his RAND study *The Conflict Over Kosovo: Why Milosevic Decided to Settle When He Did*. Hosmer writes,

> According to Milosevic's own testimony and the contemporary statements of senior FRY [Former Republic of Yugoslavia] officials and close Milosevic associates, the key reason Milosevic agreed to accept NATO's terms was his fear of the bombing that would follow if he refused.[21]

Hosmer also notes that the threat of a NATO ground invasion was a lesser factor in Milosevic's decision, because a ground invasion was clearly months away. He concludes,

> As of 2 June, however, Milosevic appeared clearly more concerned about the threat to his power from an intensified NATO bombing campaign than about the possible consequence of a still-distant invasion.[22]

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[20] *Operation Allied Force: Strategy, Execution, Implications*, an Eaker Colloquy, Washington, D.C., August 16, 1999, pp. 8–9 (online edition).

[21] Stephen T. Hosmer, *The Conflict Over Kosovo: Why Milosevic Decided to Settle When He Did*, Santa Monica, Calif.: RAND Corporation, MR-1351-AF, 2001, p. xvii.

[22] Hosmer (2001), p. xix.

CHAPTER FIVE

Afghanistan, 2001

Background

On October 7, 2001, President George W. Bush announced that the United States and its Coalition partners had begun operations in Afghanistan.[1] The campaign was a direct response to the September 11, 2001, terrorist attacks on the U.S. homeland by al Qaeda, which had found sanctuary and state support in Taliban-ruled Afghanistan.

Operation Enduring Freedom (OEF) was a four-phase operation. During Phase I, U.S. Central Command (CENTCOM) laid the groundwork for the operation. In Phase II, CENTCOM directed missile and air attacks against "Taliban and al Qaeda Command and Control targets, early warning radars, and major air defense systems—principally Soviet-built SA-3 missiles." Following these strikes, Special Forces teams linked up with the Northern Alliance and opposition forces to support offensives with air strikes against the Taliban and al Qaeda forces. In Phase III, Coalition troops, deployed into Afghanistan "to seek out and eliminate pockets of resistance" after "indigenous allies, augmented by about 200 SOF (Special Operations Forces), had routed the enemy." Finally, Phase IV envisioned a three- to five-year effort to stabilize and rebuild Afghanistan.[2]

From a military perspective, the first three phases of Enduring Freedom were wildly successful. The Taliban air defense "system"

[1] U.S. Department of State, Office of International Information, "President Bush Announces Military Strikes in Afghanistan," statement by the president, October 7, 2001.

[2] Tommy Franks, *American Soldier*, New York: Regan Books, 2004, pp. 269–272.

was rapidly destroyed, and the Coalition enjoyed total air supremacy throughout the operation.[3] Furthermore, the addition of precision air power quickly tilted the scales in favor of the Afghan opposition forces, and Taliban and al Qaeda forces were shattered as a coherent fighting force. Unfortunately, the Afghan opposition forces were less than reliable in pursuing the remnants of the Taliban and al Qaeda. This lack of aggressive pursuit allowed the Taliban and al Qaeda to disperse, thus hindering success in Phase IV and requiring U.S. ground forces to root out remaining pockets of resistance in the difficult mountainous Afghan terrain and to conduct an ongoing counterinsurgency campaign.[4]

Ground-Centric View: Strategic and Operational Lessons

Operation Enduring Freedom was an unusual war. The "operational" phase of the war was a series of engagements by Afghan opposition forces, buttressed by U.S. air power and Special Forces, against Taliban and al Qaeda forces. Conventional U.S. ground forces played little, if any, role in the regime-toppling phase of the war.

Stephen Biddle perhaps best sums up the perspective of ground advocates concerning the lessons of Afghanistan. He surveys the various lessons emerging from the war, which ranged from those advocating the "Afghan Model" of "special forces (SOF) plus precision munitions plus an indigenous ally as a widely applicable template for

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[3] One could argue that Phase III was not necessary, given the fact that U.S. ground forces never had to conduct "decisive operations" because of the success of air power and indigenous forces in Phase II. Instead, U.S. ground forces conducted largely tactical operations to kill or capture al Qaeda and Taliban fighters that the Afghan opposition forces refused to pursue.

[4] Franks (2004), pp. 283–381; see also Stephen Biddle, *Afghanistan and the Future of Warfare: Implications for Army and Defense Policy*, Carlisle Barracks, Pa.: U.S. Army War College Strategic Studies Institute, 2002, pp. 8–12, and Anthony H. Cordesman, *The Lessons of Afghanistan: Warfighting, Intelligence, and Force Transformation*, Washington, D.C.: Center for Strategic and International Studies, 2002, pp. 3–25.

American defense planning" to the war as "a nonreplicable product of local idiosyncrasies."[5]

Biddle argues that Phase II of the campaign in Afghanistan, when the Afghan opposition defeated the Taliban and al Qaeda, was "a typical 20th century mid-intensity conflict."[6] The essence of his argument is that air tipped the scales in Afghanistan because both the Taliban/al Qaeda forces and the opposition forces were fairly evenly matched in training and motivation. Absent this equivalence of competence and zeal, as Biddle believes was the case of the battle of Tora Bora, "failure to commit properly trained and motivated troops to traditional close combat probably allowed the al Qaeda quarry to escape."[7]

This is not an unimportant argument for ground-centric proponents. In essence, it is an argument against those who, in Biddle's view, now see the Afghan campaign as evidence that the American military can be redesigned to emphasize long-range precision strike at the expense of close combat capability.[8]

Air-Centric View

From the perspective of its advocates, air power had truly come of age in Enduring Freedom. Clearly, air power provided the decisive support that the Northern Alliance and Afghan opposition forces needed to topple the Taliban and al Qaeda. Enduring Freedom also yielded a number of "battlefield firsts" in the employment of air power, including first combat deployment of the Global Hawk Unmanned Aerial Vehicle, first operational use of an armed version of the Predator UAV, and the widespread use of the satellite-guided Joint Direct-Attack Munition.[9]

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5 Biddle (2002), pp. 8–12. For various views of the "Afghan Model" and a new "American Way of War," see Biddle's footnotes on pp. 1–5.

6 Biddle (2002), p. vii.

7 Biddle (2002), pp. vii–viii.

8 Biddle (2002), p. 50.

9 John A. Tirpak, "Enduring Freedom," *Air Force Magazine*, February 2002, p. 32.

Furthermore, given the fact that the Coalition enjoyed total air supremacy, or "air dominance," to use the new term of art, aircraft such as the B-52 bomber loitered on station with near impunity. Indeed, B-52s provided close air support to ground forces.[10] Precision, coupled with the capability to provide in-flight targeting to aircrews, improved the flexibility of air power and its ability to hit not only preplanned but also emerging targets.

Nevertheless, there was one notable instance of interservice tension during Enduring Freedom. Its genesis was in the controversy that arose after the critical comments of an Army general over the ability of the U.S. Air Force to provide adequate support to his forces in a tactical operation called Operation Anaconda.

Ground-Air Tensions and the Tactical Ground-Centric Lessons of Operation Anaconda

The first major combat operation of U.S. ground forces during Enduring Freedom was Operation Anaconda, in March 2002. Anaconda's purpose was to eliminate Taliban and al Qaeda fighters in the Shah-I-Kot Valley who had escaped the Afghan opposition offensives—most notably, at Tora Bora.[11] Anaconda showed significant shortfalls in the ability of U.S. forces to achieve battlespace awareness in complex terrain, significant problems with integrating cross-service capabilities, and the vulnerability of attack helicopters to ground fire.

Major General Franklin L. "Buster" Hagenbeck, commander of the Army's 10th Mountain Division, led the force that executed Operation Anaconda. Combined Joint Task Force (CJTF) Mountain had some 200 Special Forces soldiers, 1,400 U.S. conventional troops (from the 10th Mountain Division and the 101st Airborne Division), and 800 to 1,000 Afghans, supported by 24 lift helicopters and eight

[10] Tirpak (2002), pp. 32–33. AC-130s were also used to great effect, but they operated only at night because of their vulnerability to surface fire.

[11] Franks (2004), p. 377. For a detailed description of Operation Anaconda, see Sean D. Naylor, *Not a Good Day to Die: The Untold Story of Operation Anaconda*, New York: Berkley Books, 2005.

AH-64 Apache attack helicopters. Although CENTCOM had estimated that some 1,500 to 2,000 Taliban and al Qaeda were in the Anaconda operational area, CJTF Mountain had revised that estimate to between 125 and 200 enemy fighters, based on an additional month of satellite, UAV, and human intelligence.[12] This estimate was woefully off the mark, and it provides insight into how a determined enemy can escape detection from U.S. ISR systems.

The assault phase of Anaconda began on March 2. The Afghan force that was to perform the main effort ran into "heavy enemy fire, including 122-mm howitzers and mortars" and withdrew.[13] Their withdrawal left the enemy free to concentrate on U.S. forces, and "within a matter of hours, CJTF Mountain was fighting for its life."[14] General Hagenbeck "was forced to issue an emergency appeal for air and naval fires and logistical assistance."[15] Unfortunately, this critical close air support (CAS) had not been planned for adequately, because General Hagenback had not directly involved the CENTCOM air component in his preparations.[16]

In the aftermath of Anaconda, General Hagenbeck conducted an interview with *Field Artillery* in which he was critical of the CAS he received from the U.S. Air Force. He implied that Air Force pilots would not fly low enough to the ground to be effective and that they were not responsive.[17] Understandably, these claims ignited a debate between the two services.

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[12] Mark G. Davis, *Operation Anaconda: Command and Confusion in Joint Warfare*, thesis, Maxwell Air Force Base, Ala.: Air University, School of Advanced Air and Space Studies, 2004, pp. 95–100.

[13] Mark Davis (2004), pp. 110–111.

[14] Mark Davis (2004), p. 113.

[15] Elaine M. Grossman, "Was Operation Anaconda Ill-Fated from Start? Army Analyst Blames Afghan Battle Failing on Bad Command Set-Up," *Inside the Pentagon*, July 29, 2004a.

[16] Mark Davis (2004), pp. 94–125.

[17] Robert H. McElroy and Patrecia Slayden Hollis, "Afghanistan: Fire Support for Operation Anaconda, Interview with Major General Franklin L. Hagenbeck," *Field Artillery*, September–October 2002, pp. 7–8.

At the end of the day, most of General Hagenbeck's complaints about air support proved unfounded.[18] Nevertheless, there was a clear lesson for both services:

> The message that needs to come of this issue is that to optimize air-ground synergy, the air component must be included in all phases of planning surface operations and vice versa. That is what went awry in Anaconda, not CAS.[19]

Aside from the ground-air tensions, mainly between the Army and the Air Force, Operation Enduring Freedom offered several other lessons about Army operations that remained largely unlearned and would crop up again during the 2003 Iraq war and its aftermath. The first concerned the vulnerability of attack helicopters; the second concerned the nature of the types of war the Army could expect to fight in the future.

Operation Anaconda witnessed the use of AH-64 Apache attack helicopters in a ground support role. Although General Hagenbeck regarded the Apaches as effective, he simultaneously, and likely unintentionally, cast doubt on their survivability at low altitudes with a significant small-arms threat: "We had six in the fight with two left flying at the end of the first day. They were so full of holes—hit all over."[20]

Apache survivability transcends the context of Afghanistan, because the Apache was (and is) a key system in the Army's concept of executing deep battle operations. Thus, to be able to employ the Apache effectively in deep battle, the Army doctrinally controls sufficient battlespace to employ it at operational depths. If the Apache was not survivable, then the Army's claim on an expansive battlespace—and a far-forward FSCL—would be less compelling.

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[18] Benjamin S. Lambeth, *Air Power Against Terror: America's Conduct of Enduring Freedom*, Santa Monica, Calif.: RAND Corporation, MG-166-CENTAF, 2005. See pp. 163–231 for a discussion of Operation Anaconda. General Hagenbeck's criticisms and an assessment of their validity are on pp. 204–221.

[19] Lambeth (2005), p. 231 (the quote is from Maj Gen David Deptula, USAF).

[20] McElroy and Hollis (2002), p. 7.

The second lesson pertained to the changing nature of conflict witnessed in Operation Anaconda, which would continue to be troublesome in Afghanistan—and eventually in Iraq—after the conclusion of conventional military operations. Stephen Biddle wrote about his concerns for the U.S. armed forces being able to learn the lessons implied by Afghanistan—lessons that, in particular, went against the Army's doctrinal grain. He believed that the analytic tools used by the U.S. military for force structure analyses, "based largely on mounted or aerial warfare against exposed armored targets[,] are dangerously misleading," in that they "treat warfare mainly as a problem of interactions among armored vehicles and major weapon systems."[21]

[21] Biddle (2002), pp. 51–52.

CHAPTER SIX

Iraq, 2003

Background

On November 27, 2001, Secretary of Defense Donald H. Rumsfeld called General Franks and told him that "the President wants us to look at options for Iraq."[1] "G-Day," or the ground invasion across the Kuwaiti border into Iraq, occurred 16 months later, early in the morning of March 21, 2003 (D + 2). "A-Day," the start of major air operations, began on the evening of March 21. The decisive operations phase of the campaign progressed rapidly, and on April 9—21 days after ground forces began combat operations—the Iraqi regime collapsed and U.S. forces occupied Baghdad.

Clearly, the Iraqis were woefully outclassed by the enormous advantages in technical capabilities and force competence that the Coalition employed in Operation Iraqi Freedom (OIF). Furthermore, the morale and readiness of Iraqi forces was very low before OIF.

Lessons about the relative roles of ground and air power in Iraqi Freedom have emerged. They are perhaps most apparent in the relationship between the U.S. Army V Corps (and its main effort, the 3rd Infantry Division) and the CFACC.

[1] Franks (2004), p. 315.

A Joint Ground-Centric View

The mission statement issued by Lieutenant General David McKiernan, the combined forces land component commander (CFLCC), in his March 19 execution order, is a masterpiece of brevity:

> Mission: CFLCC attacks to defeat Iraqi forces and control the zone of action, secure and exploit designated sites, and removes the current Iraqi regime. CFLCC conducts continuous stability operations to create conditions for transition to CJTF-Iraq.[2]

It was a "rolling start," beginning on G-Day with the forces in theater, which would be reinforced during the campaign. This decision carried some risk. Of the four Army divisions that the original plan required, the 3rd Infantry Division (ID) was the only one ready to fight. The remaining units were still moving into the theater, linking up with their equipment, or moving forward to attack positions.[3]

From the Army perspective, Coalition air power made a crucial difference in the success of OIF, particularly in the availability of CAS and shaping fires. In the mind of Lieutenant General William S. Wallace, V Corps commander, one occasion in particular epitomized the powerful effects of joint ground-air operations. Toward the end of the drive to Baghdad, General Wallace executed several limited attacks whose objective was "to deceive enemy units into repositioning and to destroy enemy reconnaissance capabilities."[4] General Wallace later recalled:

> I believe our attacks caused him to react to our actions, fully knowing that if he did not react to them, given the limited successes that we had in those actions, then he would be out of posi-

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[2] Gregory Fontenot, E. J. Degen, and David Tohn, *On Point: The United States Army in Operation Iraqi Freedom*, Fort Leavenworth, Kan.: Combat Studies Institute Press, 2004, p. 95.

[3] Fontenot, Degen, and Tohn (2004), p. 94.

[4] Fontenot, Degen, and Tohn (2004), p. 259.

> tion. So he started repositioning—vehicles, artillery, and tanks on [equipment transporters]—in broad daylight, under the eyes of the US Air Force.
>
> I believe it was one of those classic cases of a maneuver action setting up operational fires[,] which in turn set up for a successful decisive maneuver.[5]

This maneuver differs completely from what is frequently referred to as "the hammer and anvil" approach, in which air power serves as a "hammer," smashing enemy forces against the ground power "anvil."[6] Instead, it is more a case of ground power flushing the enemy, allowing air power to maul its forces, then having ground power finish the fight against the remnants and controlling the ground dimension in the aftermath of combat.

The importance of "shaping" the battlefield with air power, enabled through high levels of operational situational awareness, was that it created a tactical condition whereby Coalition ground forces never faced large conventional Iraqi formations directly. Enemy forces between Baghdad and Iraq's southern border could not maneuver in large formations without the strong possibility of being detected and accurately attacked, anytime, anywhere, day or night, and in any weather.

However, at the tactical level, situational awareness, as in Operation Anaconda in Afghanistan, remained a particularly difficult problem. Quite simply, as the Army history of OIF notes, units could not "remotely identify and continuously track Iraqi units that chose to move by infiltration and to shield themselves where and when possible." Although commanders had a sense of where they would encounter the enemy, "Most tactical unit commanders claimed that they made every assault as a movement to contact."[7]

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5 Fontenot, Degen, and Tohn (2004), p. 260.

6 Robert A. Pape, "The True Worth of Air Power," *Foreign Affairs*, March/April 2004, p. 117.

7 Fontenot, Degen, and Tohn (2004), p. 422. This account notes "The ability of Iraqis to hide, with some success, from the incredible array of technical intelligence available to the

Perhaps OIF's most troublesome experience for proponents of a ground-centric approach to warfare was the performance of the AH-64 Apache helicopter units in executing deep battle operations. Members of the Army aviation community view their units as "maneuver forces engaged in shaping the battlespace and conducting decisive combat operations by employing direct fire and standoff precision weapons in combined arms operations."[8] Use of attack helicopters in deep operations is integral to this vision.

On March 23, as V Corps moved north toward Karbala, General Wallace ordered the 11th Attack Helicopter Regiment (AHR) to execute deep strike operations against the Iraqi *Medina* Division. The purpose of the mission was straight out of aviation doctrine: "to shape the Corps' battlespace and thereby provide the 3rd Infantry Division freedom to maneuver in the Karbala area by destroying the artillery and armor forces of the 14th, 2nd, and 10th Brigades of the *Medina* Division."[9]

The 11th AHR employed elements of its organic 2-6th Cavalry Squadron and the 1-277th Attack Helicopter Battalion (AHB), attached from the 1st Cavalry Division, in its deep operation the night of March 23.[10] The 11th AHR ran into a hornet's nest of ground fire as it flew over built-up areas en route to its objectives.[11] The Iraqis, aware of American suppression of enemy air defenses (SEAD) capabilities,

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coalition may give pause to those advocating that US forces will be able to develop the situation out of contact and attack from standoff distances."

8 U.S. Department of the Army, FM 1-100, *Army Aviation Operations*, Washington, D.C., 1997, Chapter 2, p. 3.

9 Fontenot, Degen, and Tohn (2004), p. 180.

10 Fontenot, Degen, and Tohn (2004), p. 185. The 11th AHR had three squadron-sized units in OIF: the 2-6th and 6-6th Cavalry and the 1-277th Attack Helicopter Battalion (AHB) from the 1st Cavalry Division (attached). The 2-6th Cavalry and the 6-6th Cavalry each had 21 Apaches (the regiment had a total of 21 AH-64A Apaches and 21 AH-64D Longbow Apaches; the 1-277th AHB had 18 AH-64D Longbow Apaches).

11 Fontenot, Degen, and Tohn (2004), p. 186. The deep operation was executed by elements of the 6-6th Cavalry and the 1-277th AHB, because there was sufficient fuel for only 31 of their Apache helicopters, and one of these crashed at the assembly area. Nevertheless, the "regiment leadership believed they had adequate resources" for the mission (p. 185).

"appear to have relied on ground observers who reported on cellular phones and low-power radios" the approach of the Apaches. It was an "air defense 'system,'" largely reliant on optically directed small arms and machine-gun fire "that was virtually impossible to detect and suppress."[12] This "system" was very effective against low-flying, relatively slow helicopters.

Neither of the regiment's battalions had any appreciable effect on the *Medina* Division before they withdrew in the face of withering ground fire, and they both suffered significant damage. All 30 Apaches were hit, with one battalion's helicopters "[o]n average . . . sporting 15-20 bullet holes each." One Apache was lost in action and its crew captured.[13]

The 101st Airborne Division's aviation brigade conducted the second, and last, deep attack operation of OIF with attack helicopters on March 28. The results were less than hoped for. One battalion never found any targets. The second, in conjunction with Air Force and Navy fighters, "destroyed six armored personnel carriers, four tanks, five trucks, and a fiber optic facility. . . . [and] killed approximately 20 troops. . . . not a high count by 'exercise standards.'"[14]

After the 101st's deep attack, attack helicopter operations shifted to a different set of missions. Importantly, however, the post-Karbala experiences of the 101st Airborne Division show the contributions—and potential—of Army attack helicopters in roles other than deep attack operations.

The 101st Airborne Division adapted to "enemy and environmental factors" and shifted its attack helicopter units to "daylight armed reconnaissance and security operations ISO (in support of) ground forces clearing urban areas and other tactical objectives."[15] The day-

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[12] Fontenot, Degen, and Tohn (2004), p. 191.

[13] Fontenot, Degen, and Tohn (2004), p. 189.

[14] Fontenot, Degen, and Tohn (2004), p. 195.

[15] U.S. Army, 101st Airborne Division (Air Assault), "Aviation Operations During Operations Iraqi Freedom," briefing, undated, slide 58. (Available from author of this monograph.)

light armed reconnaissance missions—long-range attacks to protect the flank of V Corps—were sophisticated joint operations.[16]

Colonel Gregory P. Gass, commander of the 101st Aviation Brigade (Attack) during OIF, later recalled why daylight operations became the norm after the Karbala deep attack, during which the brigade lost two helicopters to "mishaps, both at night with zero illumination."[17] Gass stated,

> Our accidents did convince us to re-evaluate some of our tactics, techniques and procedures—most notably conducting attacks in daylight rather than at night to minimize the dust's effects during takeoff and landing. Poor visibility remained an issue; dust storms lingered throughout the region.[18]

Gass also writes that daylight operations were largely possible because of the absence of a sophisticated air defense threat during operations over the enemy. All of these factors resulted in a pragmatic assessment by the 101st Airborne Division after the Karbala mission: The "enemy did not present a massed target array; consequently[,] risks (especially night desert landings) of conducting deep attacks outweigh potential effects on target."[19]

The 101st's attack helicopters were also valuable in close combat attack missions, supporting ground operations in battles that "contributed to the liberation of Karbala, An Najaf, Al Hillah, Iskandiriyah, Al Mahmudiya, Qayyarah, Mosul."[20] As American "troops punched

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[16] U.S. Army, 101st Airborne Division, undated, slide 58, and Richard J. Newman, "Ambush at Najaf," *Air Force Magazine*, October 2003, p. 63. Although the 101st Airborne Division conducted operations with attack helicopters after Karbala that "went deep," they were not the "deep attack" missions, defined in Army aviation doctrine: "Deep attacks by corps ATKHBs [attack helicopter battalions] help the corps commander to shape the battlefield and set the terms for close operations" (U.S. Department of the Army, FM 1-112, *Attack Helicopter Operations*, Washington, D.C., 1997, p. 1-6).

[17] Gregory P. Gass, "The Road Ahead," *Rotor and Wing*, October 2003, p. 26.

[18] Gass (2003), p. 25.

[19] Gass (2003), p. 25.

[20] U.S. Army, 101st Airborne Division, undated, slide 58.

through areas such as the Ramadi Gap, al Hillah, and Karbala, Apaches often hovered 'over the shoulder' of ground units, guarding their flanks, protecting supply lines, and conducting standoff attacks of enemy troops up to five miles ahead."[21] Apaches also supported air assault raids in the aftermath of major combat operations in Anbar Province in summer 2003 (often with Special Operations Forces and close air support) on terrorist sites and against high-value targets, and they provided a quick reaction force capability throughout the division's AO.[22]

In Iraq, the Army—as it is in Kosovo and Afghanistan—remains engaged in stability and support operations. In Iraq, however, the Army is also contending with a difficult and deadly insurgency. In this environment, Army attack aviation continues to adapt and to provide critical support to ground forces, as it did during OIF.

A Joint Air-Centric View

Much of air power's contribution to ground operations during OIF has already been discussed. Air power, however, had a much broader range of activity before and after OIF than shaping the battlespace for the ground campaign. Shaping for air dominance had occurred before the actual start of OIF. Between June 2001 and March 19, 2003, Coalition aircraft "flew 21,736 sorties, struck 349 Iraqi air defense targets, and fired 606 munitions" during Operation Southern Focus. This campaign focused on suppressing Iraqi air defenses in preparation for the impending war.[23] Air forces achieved nearly total air dominance shortly after the first OIF air strikes on March 19.[24]

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[21] Newman (2003), p. 63.

[22] U.S. Army, 101st Airborne Division undated, slides 39–52, 58.

[23] Anthony H. Cordesman, *The Iraq War: Strategy, Tactics, and Military Lessons*, Washington, D.C.: Center for Strategic and International Studies, 2003, p. 253.

[24] Cordesman (2003), pp. 253–254. See also Suzann Chapman, "The 'War' Before the War," *Air Force Magazine*, February 2004.

Some 1,800 Coalition aircraft conducted approximately 20,000 strikes during OIF, with the vast majority (79 percent) focused on Iraqi ground forces.[25] The remaining sorties were directed "against Iraqi government targets . . . Iraqi Air Force and Air Defense Command targets . . . [and] suspected sites, forces, and installations that might have weapons of mass destruction or surface-to-surface missiles."[26] Furthermore, rapidly retargeting strike assets "enabled the United States to respond to active intelligence rather than bomb predetermined or fixed targets by the numbers."[27]

The Coalition air effort in OIF was critical, because it set the conditions for successful major combat operations. The Iraqi soldier knew that his unit was defenseless against Coalition aircraft and that this defenselessness made efforts to resist the invasion both dangerous and futile. The effect on Iraqi morale was devastating. The combination of air dominance, vastly improved command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR), precision, and all-weather, day-or-night capabilities gave Coalition air power an unprecedented capability to seek out and strike the enemy under almost any conditions. Thus, the Coalition was able "to locate and target Iraq forces under weather conditions the Iraqis felt protected them from the air."[28]

As a member of the Iraqi General Staff described the effect Coalition air power had on the overall ability of the Iraqi Army to respond to Coalition ground force maneuver,

> Defeat was in large part due to our inability to move troops and equipment because of devastating US air power . . . our divisions were essentially destroyed by air strikes when they were still about 30 miles from their destinations. Before elements of the 3rd

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[25] Cordesman (2003), p. 275.

[26] Cordesman (2003), p. 275.

[27] Cordesman (2003), p. 282.

[28] U.S. Army 3rd Infantry Division, *Third Infantry Division (Mechanized) After Action Report: Operation Iraqi Freedom*, Fort Stewart, Ga., 2003, p. 304.

> Infantry Division were in a position to launch their main assault, the [Iraqi] Medina Division had disintegrated.[29]

After its mauling by Coalition air dominance, the Iraqi Army largely ceased to be an operational threat to the Coalition.[30]

Areas of Ground-Air Tension

The "jointness" of the OIF campaign was better than in previous campaigns. Unlike in the first Gulf War, which was largely an air campaign followed by a ground campaign, OIF witnessed unprecedented levels of joint interdependence. CENTCOM had taken significant steps since Afghanistan to improve joint relationships. The CFACC for OIF placed "a two-star general [Major General Daniel Leaf] inside the ground component commander's Kuwait headquarters . . . to serve as his personal representative in coordinating air-ground operations." This placement enabled CFACC to "offer air and space expertise from the very beginning, from the genesis of the motion, whether it's ever executed or not."[31] Furthermore, "[b]andwidth and information connectivity resulted in a high degree of interoperability" between the components, and there was "seamless integration of service component efforts in the CAOC [combat air operations center]," resulting in "unprecedented cooperation among components."[32] Thus, in OIF, "land power reinforced air power and vice versa."[33]

Despite the significant improvements in ground-air effectiveness, some issues lingered. It appears from the available evidence that the

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[29] Lt Col Mark Simpson, Air Combat Command, "Airpower Lessons from Operation Iraqi Freedom," briefing, Langley Air Force Base, Va., November 25, 2003.

[30] For a report on the level of the air effort in OIF, see T. Michael Moseley, "Operation Iraqi Freedom—By the Numbers," Prince Sultan Air Base, Saudi Arabia: Central Air Forces, 2003.

[31] Elaine M. Grossman, "Anaconda: Object in Ill Planning or Triumph of Improvisation?" *Inside the Pentagon*, August 19, 2004b.

[32] Simpson (2003), slide 14.

[33] Cordesman (2003), p. 216.

single greatest point of tension between the Army and the Air Force during OIF was the old one of battlespace management. Resolving this issue is difficult, because it involves resolving different notions of how to execute operations. Again, Army deep attack concepts and the placement of the FSCL lie at the heart of the matter.

During OIF, the CFLCC was responsible for placing the FSCL. In the V Corps AO, the CFLCC deferred to the corps. V Corps routinely requested an FSCL 100 or more kilometers past the forward edge of the battle area (FEBA),[34] which enabled V Corps to employ its organic systems—Apache helicopters and Army Tactical Missile System (ATACMS)—out to the limits of their range.[35] As a consequence, "joint targeting operations in the V Corps area of responsibility were extremely restrictive" for other than V Corps systems.[36] Indeed, the 11th AHR operation on the night of March 23 essentially shut down fixed-wing aircraft operations in large parts of the V Corps AO.

The Air Combat Command OIF briefing highlighted in rather neutral language this area of tension over fire control measures: "Doctrinal limitations of fire control procedures sub-optimizes [sic] the attainment of joint force objectives."[37] The 3rd Infantry Division report was more direct, forcefully recommending the following:

> Place the FSCL close enough to the FEBA so that organic indirect fires would be able to range most targets short of the FSCL. . . . Placing the FSCL closer to V Corps maneuver allows the CFACC to adequately resource, conduct ISR, attack, and provide feedback. . . . The argument seems to be that CFACC would not ade-

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[34] U.S. Army 3rd Infantry Division (2003), p. 102. See also Michael B. McGee, Jr., *Air-Ground Operations During Operation Iraqi Freedom: Successes, Failures, and Lessons of Air Force and Army Integration*, thesis, Maxwell Air Force Base, Ala.: Air War College, 2005, p. 17. McGee, who served in the air support operations center (ASOC) supporting V Corps during OIF, notes that the FSCL was usually 30 nautical miles beyond the forward line of troops (approximately 55 kilometers).

[35] U.S. Army 3rd Infantry Division (2003), p. 106.

[36] U.S. Army 3rd Infantry Division (2003), p. 108.

[37] Simpson (2003), slide 27.

> quately address V Corps targeting requirements; 3ID (M) [Mechanized] violently disagrees. CFACC is a component, manned and equipped to effectively manage this battlespace forward of the FSCL; V Corps is not and has demonstrated their inability to manage said battlespace. 3ID (M) believes CFACC is better prepared to engage targets to effectively shape the battlefield.[38]

One sentence in the 3rd Infantry Division report, however, perhaps best sums up the solution to ground-air tensions in the post-OIF era: "The U.S. Army must redefine the battlespace based on our ability to influence it."[39]

[38] U.S. Army 3rd Infantry Division, (2003), p. 108.

[39] U.S. Army 3rd Infantry Division, (2003), p. 108.

CHAPTER SEVEN

What Has Been Learned, and What Has Not?

This review of post–Cold War operations shows that the United States has a unique military capability that has only grown more impressive since the first Gulf War. In the realm of large-scale theater warfare, today's U.S. armed forces have no peer. Furthermore, the services have made significant accommodations to joint operations. Nevertheless, in the area of ground and air operations, important warfighting lessons have not been learned, have been consciously ignored, or have been filtered through service perspectives.

This study assessed several post–Cold War operations to test the hypothesis that a shift has occurred in the relative roles of ground power and air power in warfighting. The results of this assessment appear in Table 7.1 and show two trends. First, across the five cases examined in the longer monograph, air power showed increasing effectiveness and robustness and played commensurately larger roles. Second, Army officers show a gradual acceptance of this reality.[1] Yet, despite the Army officers' apparent acceptance of the increased warfighting effectiveness of air power, Army doctrine is not being revised to accommodate this new reality.

[1] The cases examined in this study represent all the "warfighting" cases since the end of the Cold War. Consequently, there is one significant qualification that pertains to all of the cases: In its post–Cold War conflicts, the United States and its Coalition partners have never faced a first-rate (or, some would say, even a second-rate) opponent.

Table 7.1
Case Assessment Results

Case	Ground-Centric	Air-Centric	Integrated	End State
Iraq, 1991	Ground campaign decisive after air softened Iraqi forces.	Air power set the conditions for overwhelming success—all but won the war.	Air campaign significantly weakened an incompetent opponent who was defeated by ground power.	Containment/ sanctions for 10+ years; OIF
Bosnia	Croat-Muslim ground offensive principally responsible for Serb concessions.	Decisive and precise air power forced Serb concessions.	Combination of ground threat and air attack and low stakes for Serbs resulted in concessions; rapidity yields false expectations about Serb will to resist.	MOOTW
Kosovo	Threat of a ground invasion caused Milosevic to yield; center of gravity Serb Forces in Kosovo; a minor view held that Kosovo Liberation Army influenced decision	Air power forced Milosevic to yield after stepping up modest initial campaign; center of gravity "downtown"—what Milosevic valued; attacking forces in Kosovo a waste of bombs.	Air attack against infrastructure targets changed the political dynamic. This use of air power, coupled with diplomatic isolation (Russians) and NATO unity, caused Milosevic to yield. Ground threat a future consideration and may have influenced to a lesser degree.	MOOTW

Table 7.1—Continued

Case	Ground-Centric	Air-Centric	Integrated	End State
Afghanistan	Anti-Taliban Afghan ground forces, enabled by air power, overcame Taliban and al Qaeda. CAS not responsive during Operation Anaconda, when U.S. ground forces necessary to root out remnants.	Air power decisive in giving anti-Taliban Afghans the edge. Also key in Operation Anaconda in protecting U.S. ground forces.	Air power decisive in giving Afghans the edge, but U.S. ground forces needed to do the searches and rooting out that surrogate Afghan forces did not want to do. Air power critical in Operation Anaconda.	MOOTW
Iraq, 2003	"Shock and awe" did not obviate the need for ground combat; "boots on the ground" were needed to destroy Saddam's regime and occupy Iraq. Nevertheless, air power was a key enabler in achieving these objectives.	Air power set the conditions for rapid success on the ground, despite being in a supporting role. However, control of the FSCL by ground commanders limited air power's contribution in the "deep battle" (as defined by the Army and Marine Corps).	Air power precluded effective positioning and employment of Iraqi ground forces, even in bad weather or darkness, often shattering units before they could close with Coalition ground forces. This not only reduced the costs, risks, and duration of the Coalition campaign to remove Saddam's regime, but largely left Coalition ground units to mop up the remnants of shattered enemy formations to close battle where friction persisted unabated.	MOOTW

NOTE: The term MOOTW, as noted earlier, has been removed from the joint doctrinal lexicon per the September 2006 JP 3-0, *Joint Operations*. However, regardless of what term is used, none of the cases examined in this study has reached a strategic political end state that does not require the presence of substantial military forces.

This shift in the relative roles of ground and air power was most apparent in OIF. Several findings emerge from the assessment of that war:

- The operational level of warfighting against large conventional enemy forces was dominated by flexible, all-weather, precision-strike air power enabled by ISR.
- The tactical level of war and the exploitation of the operational effects of air power were the primary domains of ground power. And, despite significant increases in ISR-enabled situational awareness at the strategic and operational levels, uncertainty at the tactical and close combat levels of war endures.
- Successful major combat operations did not necessarily achieve the desired strategic political end state or resolve the conflict. A protracted postwar U.S. presence following major operations (previously defined in joint doctrine as MOOTW) has been the norm.
- The Army and the Air Force experience the greatest interservice tension over the relative roles of ground and air power in warfighting. This tension is largely the result of deep, culturally rooted differences in warfighting perspectives. Joint doctrine, however, mainly defers to the surface components' views in how it designates and defines areas of operation, which are supportive of Army views about deep operations. Generally, AOs are expansive, to promote an aggressive surface scheme of maneuver and to enable the maximum use of the organic capabilities of the surface components. The Army's doctrine tends to retain control over a large AO so that a corps can control and shape the battlespace for its fight and employ its organic assets (ATACMS and attack helicopters) to the limits of their capabilities as part its shaping efforts. Not surprisingly, Army operational commanders want to control the resources used in their AOs. Such control is accomplished by establishing fire support coordinating measures—for example, the FSCL—within the corps or combined/joint force land component commanders' AOs, which are permissive for Army systems but restrictive for the systems of other components.

- Army deep attack systems (attack helicopters and ATACMS) are inadequate to the task of effectively conducting deep battle. Using air power short of the FSCL has often been inefficient because of coordination requirements.
- Despite improved joint "interdependence," U.S. military operations remain an amalgamation of component operations, designed for optimal employment of their organic capabilities. The fact that words such as *supported* and *supporting* remain in joint doctrine as descriptions of the relationship between components reflects this reality.

Assuming that these findings are correct, the question that logically follows is: What have the joint community, Army, and Air Force taken from these operations? The discussion that follows suggests that the record of joint, Army, and Air Force "learning" in this area is mixed. There are essentially three reasons for this situation:

- Joint doctrine is inadequate because it defers to surface components in the establishment of AOs.
- The Army's retention of control of large AOs in support of its preferred warfighting role—offensive operations at the operational level—constrains the potential effectiveness of joint fires across the theater of operations.
- The Air Force's continued push of its decades-long quest for equality (preeminence, some would say) creates tension between it and the other services—most notably, with the Army.

The Inadequacies of Joint Doctrine

In the aftermath of OIF, changes are being made to joint doctrine, including the September 2006 publication of a new JP 3-0, *Joint Operations*, which consolidates JP 3-07, *Joint Doctrine for Military Operations Other Than War* and JP 3-0, *Doctrine for Joint Operations*.[2] This

[2] U.S. Joint Chiefs of Staff, JP 3-0 (2006), p. iii.

new publication also has a more sophisticated and expansive discussion of the range of military operations than did the 2001 version. Furthermore, the new JP 3-0, as did the 2001 version, specifies that during campaigns, "[f]unctional and Service components of the joint force *conduct supported, subordinate, and supporting operations, not independent campaigns*."[3] This statement, however, is contingent upon another that delineates how "supported" and "supporting" relationships are established. To begin with, JFCs establish land and naval AOs; within these areas, land and naval commanders are designated the "supported commander" and are responsible for the integration and synchronization of maneuver, fires, and interdiction.[4]

Thus, what is critical in determining the intercomponent relationships is the definition of the land and naval component AOs. In the case of ground AOs, joint doctrine defers largely to the ground component commander.[5]

The problem, as demonstrated in both Gulf Wars, is that JFCs generally accede to the ground commander's desire to have an expansive AO. The operational doctrine for both the Army and the Marine Corps include similar discussions of the parameters of an AO. The relevant Army doctrine is in FM 3-0, *Operations*.[6] The Marine Corps doctrine for an AO is in Marine Corps Doctrinal Publication (MCDP) 1-0, *Marine Corps Operations*.[7] Both the Army and the Marine Corps also have doctrine for deep operations, but their capabilities for these operations are markedly different. The Marine commander typically has Marine Corps fixed-wing aviation, with aircraft with capabilities similar to those of Air Force aircraft, supporting him. Furthermore,

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[3] U.S. Joint Chiefs of Staff, JP 3-0 (2006), p. II-12. Emphasis in the original. See also U.S. Joint Chiefs of Staff, JP 3-0 (2001), p. II-4, which has identical wording.

[4] U.S. Joint Chiefs of Staff, JP 3-0 (2006), p. xxiv.

[5] U.S. Joint Chiefs of Staff, JP 3-31, *Command and Control for Joint Land Operations*, Washington, D.C., 2004, p. II-2.

[6] U.S. Department of the Army, FM 3-0 (2001), p. 4-19.

[7] U.S. Department of the Navy, Marine Corps Doctrinal Publication (MCDP) 1-0, *Marine Corps Operations*, 2001, pp. 4-5, 4-6. See also p. 6-3 for a discussion of what constitutes a "battlespace."

he can generally count on retaining control of these aircraft because JP 0-2, *Unified Action Armed Forces (UNAAF)*, specifies that he will do so.[8]

Service Cultures as Constraints to Joint Culture

Service culture is manifested in service doctrine.[9] In the U.S. military, doctrine is a culturally shaped paradigm, similar to the paradigms employed by scientific communities, described by Thomas Kuhn in his classic study *The Structure of Scientific Revolutions*.[10] In it, Kuhn describes how paradigms change. Paradigms shift when they fail to solve the problems against which they are applied. Failure can result in two responses. First, community members can "devise numerous articulations and *ad hoc* modifications of their theory in order to eliminate any apparent conflict."[11] The institutional Army's response to the failure of the 11th AHR's attack in OIF is an example of this type of response. Thus, the anomaly remains and does not prompt a fundamental rethinking of the validity of the paradigm—in this case, examining the underlying premises of corps operations and deep attack. Second, if the discontinuities are clearly not solvable with the existing paradigm, a new one will emerge.[12] It remains to be seen whether the difficulties the U.S. Army is experiencing in dealing with the post-OIF insurgency in Iraq may cause a rethinking of its belief that an undifferentiated Army can in fact be full spectrum capable.

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[8] U.S. Joint Chiefs of Staff, JP–02, *Unified Action Armed Forces (UNAAF)*, Washington, D.C., 2001, p. V-4.

[9] This section on doctrine as paradigm comes from David E. Johnson, *Modern U.S. Civil-Military Relations: Wielding the Terrible Swift Sword*, Fort McNair, D.C.: National Defense University Press, 1997, pp. vi–viii.

[10] Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 2nd ed., Chicago: University of Chicago Press, 1970, p. 175.

[11] Kuhn (1970), p. 78.

[12] Kuhn (1970), pp. 66–91.

The services are not unsophisticated, monolithic entities marching blindly to the beat of a rigid set of rules; however, their "institutional essence" is defined by their doctrine.[13] Doctrine is the frame of reference, derived from a particular armed force's culture, that fundamentally defines the activities of each of the armed forces by

- prescribing the shared worldview and values, as well as the "proper" methods, tools, techniques, and approaches to problem solving within and among the services
- providing a way in which the services view themselves
- governing how the services deal with each other and with other governmental and nongovernmental agencies
- prescribing the questions and the answers that are considered acceptable within the institution or school of thought covered by the paradigm.

As this study has pointed out, one of the principal weaknesses in U.S. joint doctrine is that it defers to the services and relies on "*promoting a common perspective* from which to plan, train, and conduct military operations in combat and noncombat situations,"[14] rather than demanding one. Consequently, service cultures and doctrinal paradigms largely trump joint culture and doctrine.

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[13] Morton H. Halperin, *Bureaucratic Politics and Foreign Policy*, Washington: The Brookings Institution, 1974, p. 28. I rely on Halperin's definition of *organizational essence* when I refer to *institutional essence*.

[14] U.S. Joint Chiefs of Staff, JP-1, *Joint Warfare of the Armed Forces of the United States*, Washington, D.C., 2000, p. I-8. Emphasis added. Contrast this passage with the less-deferential language in the 1991 version of JP-1, *Joint Warfare of the US Armed Forces*, which stated, "Because we operate and fight jointly, we must all learn and practice joint doctrine, tactics, techniques, and procedures; feed back to the doctrine process the lessons learned in training and exercises, and operations; and ensure Service doctrine and procedures are consistent. This is critical for our present and future effectiveness. *Joint doctrine offers a common perspective from which to plan and operate, and fundamentally shapes the way we think about and train for war*" (p. 6). Emphasis in the original.

The Army Future Force as a Reflection of Army Culture

In the aftermath of OEF and OIF, the Army is adapting to coping with the realities it is facing in today's operational environment. It has embarked on a major restructuring effort and is in the process of "modularizing" from a division-based to a brigade-based force, which will give it "a larger pool of units to fulfill strategic commitments."[15] Furthermore, the Army is divesting itself of some of its "Cold War structure."[16] Finally, the Army recently published a new FM, informed by ongoing operations, that provides guidance on combating insurgencies.[17] However, longer-term Army transformation efforts—i.e., plans for the Future Force—remain largely focused on high-end offensive combat operations. Once again, the fundamental assumption is that Army forces optimized for major operations will be able to handle the remainder of the range of military operations as lesser-included cases.

The centerpiece of Army transformation is the FCS-equipped brigade combat team (BCT), a self-contained combined arms maneuver unit.[18] The Army has high expectations for the FCS BCT, desiring it to be both strategically deployable and operationally and tactically responsive.[19] The critical enablers for the concept are the FCS, a new

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[15] U.S. Department of the Army, "Army Campaign Plan," briefing, undated.

[16] Anne Plummer, "Army Chief Tells President Restructuring Force Could Cost $20 Billion," *Inside the Army*, February 9, 2004, p. 2.

[17] See U.S. Department of the Army and Marine Corps Combat Development Command, U.S. Department of the Navy, FM 3-24/MCWP 3-33.5, *Counterinsurgency*, 2006.

[18] The Army has changed the unit designations for its ongoing redesign to modular units and the Future Force, announcing the replacement of the unit of action (UA) and units of employment (UEx and UEy) designations with brigade combat teams, divisions, corps, and armies (see "Army Announces Unit Designations in the Modular Army," *Army News Service*, September 30, 2005). UA and UE terms are used throughout this monograph, because the new designations have not been incorporated into the documents that supported this study.

[19] U.S. Army Training and Doctrine Command (TRADOC), *Change 3 to TRADOC Pamphlet 525-3-90 O & O: The United States Army Future Force Operational and Organizational Plan, Maneuver Unit of Action*, Fort Knox, Ky.: Unit of Action Maneuver Battle Lab, 2004, p. 4-5. Former Army Chief of Staff General Shinseki first established the 96-hour deployment goal for a brigade combat team in 1999. See also Alan Vick, David Orletsky, Bruce Pirnie, and Seth Jones, *The Stryker Brigade Combat Team: Rethinking Strategic Responsiveness*

"system of systems," a family of advanced, networked air- and ground-based maneuver, maneuver support, and sustainment systems that will include manned and unmanned platforms.[20]

The quest for rapid strategic deployability and a robust intratheater maneuver capability is what is fundamentally different in the Army's goals for its Future Force. Consequently, the UA (now the BCT) concept stressed: "FCS equipped UA must be transportable by inter/intratheater land, sea vessel and airlift anywhere in the world; more deployable with reduced deployment tonnage; and transportable by C-130 profile aircraft with full fighting loads."[21] The central reason to require FCS transportability by "C-130 profile aircraft" is to enable the UA [BCT] "to conduct operational maneuver to positions of advantage during a campaign, and to pursue future vertical lift concepts that are follow-on to C-130."[22]

Incorporating required capabilities into the FCS, however, has resulted in a weight increase that makes its transportability by a C-130 problematic. Consequently, the Army is attempting to create a requirement for new platforms to execute its concepts of vertical maneuver with FCS-equipped forces.[23] TRADOC Pamphlet 525-3-0, *The Army*

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and Assessing Deployment Options, Santa Monica, Calif.: RAND Corporation, MR-1606-AF, 2002, for an assessment of the difficulty that the Stryker Brigade Combat Teams will have in meeting General Shinseki's deployment goals (96-hours to employ a brigade anywhere in the world after wheels up), which could also inform a discussion of FCS-based UA deployability.

[20] U.S. Army Training and Doctrine Command (2004), p. 4.

[21] U.S. Army Training and Doctrine Command (2004), p. 185.

[22] U.S. Army Training and Doctrine Command (2004). For a discussion of Army concepts for the Future Force, and possible alternatives, see Peter A. Wilson, John Gordon IV, and David E. Johnson, "An Alternative Future Force: Building a Better Army," *Parameters*, Vol. 33, No. 4, Winter 2003–2004.

[23] See Army Science Board, *Challenges and Opportunities for Increments II and III Future Combat Systems (FCS)*, Summer 2003, pp. 4, 37, 43. This briefing makes the case for a Joint Transport Rotorcraft by noting that it would enable "Forced entry," "Over the shore logistics," and "Eases weight constraint [on the FCS]" (p. 37). The briefing further makes the case for this aircraft by citing the limitations of the C-130 ("Must use APODs [aerial ports of debarkation]"; "Cannot unload ships" [p. 43]) and implies that the FCS will weigh

in Joint Operations: The Army's Future Force Capstone Concept, 2015–2024, Version 2.0, specifically states a need for such a capability:

> Vertical maneuver of *mounted forces*, employing SSTOL [super-short-take-off-and-landing] or HVTOL [heavy lift vertical take-off-and-landing] aircraft, puts large areas at risk for the adversary and will often lead to rapid tactical decision, shortening durations of battle, and contributing to the more rapid disintegration of the enemy force.[24]

This air transportability requirement persists, despite continuing lessons about the vulnerability of aircraft that fly low and slow over a nonlinear battlefield and the reality that the Army is not developing organic systems to provide ISR and strike to forces executing vertical maneuver. The other services, absent an organic Army capability, would have to provide the crucial enabling capabilities to support the Army's emerging concepts for operational maneuver.

The strategic deployability and air transportability imperatives suggest that the Army believes that its future relevance hinges on getting to the fight rapidly, because, if it can, its fundamental cultural belief can be realized: "Land operations determine the outcome of major theater wars . . . Army forces are the decisive forces for sustained land combat, war termination, and postwar stability."[25] And these beliefs shape current and future Army concepts and capabilities.

The Problems with Army Concepts for Deep Operations

The depth to which an Army corps can acquire information far outstrips the depth to which it can effectively strike targets with its organic

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more than originally postulated because of "Current vehicle weight projections and historical weight growth" (p. 4).

[24] TRADOC, Pamphlet 525-3-0, *The Army in Joint Operations: The Army's Future Force Capstone Concept, 2015–2024,* Version 2.0, Fort Monroe, Va., 2005, p. 23. Emphasis in the original. See also Robert Scales, "The Shape of Brigades to Come," *Armed Forces Journal*, October 2005, p. 32. Scales argues that "the challenge of future warfare on land cannot be met without building modular, FCS-equipped aero-mechanized brigades that will form the aerial blitzkrieg force of the future."

[25] U.S. Department of the Army, FM 3-0 (2001) pp. 1-10, 1-11.

systems. The Army has two principal systems that it can use to attack targets beyond the approximately 40-kilometer range of its cannon and Multiple Launch Rocket System indirect fire systems—ATACMS and attack helicopters—and neither is particularly effective in the deep attack role. ATACMS has a range of in excess of 100 miles, but it cannot be retargeted in flight. Thus, the sensor-to-shooter-to-impact time is critical for using ATACMS against mobile targets. This constraint and the high cost and relatively small payload of the missile largely limit the ATACMS to high-payoff stationary targets.[26]

The AH-64 Apache attack helicopter is the Army commander's other organic resource to conduct deep operations. But post–Cold War operational experience raises three issues that call into question the ability of the AH-64 Apache to support Army deep area operations: available platforms, speed, and survivability.

The number of attack helicopters available to a corps commander to shape his battlespace is small. On the eve of OIF, V Corps and its subordinate units had a total of 151 AH-64A/Ds in theater.[27] Usually, the divisional attack helicopter units are not available to the corps commander, because they are supporting division-level operations.[28] In contrast to the two deep attack missions flown by the 11th AHR and the 101st Airborne Division—whose combined sorties totaled less than 80 on the two missions—the 735 fighters and 51 bombers in the Coalition air forces flew 20,733 sorties (approximately 700 per day) between March 19 and April 18, 2003, and over 15,592 Killbox Inter-

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[26] See also U.S. Department of the Army, "Army RDT&E Budget Item Justification (R-2 Exhibit), February 2003, 0604768A, Brilliant Anti-Armor Submunition (BAT)," Washington, D.C., 2003, pp. 623–624. The Army was pursuing a more-capable warhead for the ATACMS, the BAT. The ATACMS Block II missile would carry 13 BAT or BAT P31 submunitions (a more capable BAT munition with millimeter-wave and imaging infrared sensors). This document reported that "[t]he ATACMS BLK II and BAT P31 programs have been terminated after FY03 in order to fund Transformation and other higher priority Army programs" (p. 624).

[27] Fontenot, Degen, and Tohn (2004), p. 80.

[28] U.S. Department of the Army, FM 3-04.111, *Aviation Brigades*, Washington, D.C., 2003, Chapter 1. See also "Army Accelerates Aviation Transformation," September 7, 2001. This article details Army plans to reduce corps-level attack-helicopter battalions from 24 to 21 Apaches and heavy division attack-helicopter battalions from 24 to 18 Apaches.

diction/Close Air Support desired mean points of impact (DMPIs) were struck.[29] Furthermore, over half of the sorties approved by the CFACC were allocated to support ground forces.[30]

In addition to the small number of attack helicopters available to the corps commander, the operational characteristics of attack helicopters limit their ability to shape a large battlespace. The Apache is a relatively slow aircraft in the environment within which it typically operates during combat operations: low-level, night flight, often over unfamiliar terrain. In these circumstances, the Apache usually is not flown at its greater-than-150-knot maximum speed. Furthermore, the Apache is subject to environmental conditions that limit its employability: Throughout several crucial days during OIF, the Army's helicopter fleet was grounded by sandstorms, whereas fixed-wing aircraft continued to operate.

However, the performance challenges endemic to rotary-wing aircraft pale in comparison with the principal issue constraining the capability of the AH-64 Apache to conduct deep operations reliably: its vulnerability.

The record of the AH-64 Apache in conducting operations against dispersed and adaptive enemies has spawned a debate about its survivability against low-altitude air defense systems, ranging from small arms to man-portable air defense system missiles. One side argues that the helicopter is inherently vulnerable on the contemporary battlefield as shown in operations Allied Force, Enduring Freedom, and Iraqi Freedom. On the other side of the argument are those who believe that better tactics will enable the AH-64 to continue conducting effective deep area operations.

This is not to argue that attack helicopters have no role to play in modern combat. During OIF, the Apache proved itself a useful member of the Army combined arms team in many roles aside from deep operations. Furthermore, ongoing operations in Iraq show the value and viability of an air platform directly responsive to the ground commander in many mission areas, including reconnaissance, close combat attack,

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[29] Moseley (2003), pp. 2, 5–8.

[30] Moseley (2003), pp. 4–5.

and convoy escort. But the fundamental reality is that these aircraft must operate in a flight regime in which they can be engaged by large numbers of visually and infrared-guided systems, which cannot, under most circumstances, be suppressed reliably.

The debate about the utility and the survivability of the attack helicopter in deep area operations is an important one, because its resolution is key to determining the dimensions of the area of operations allocated to ground or air power by the combatant commander. Absent the Apache's ability to function as the key component of Army deep operations, the argument to place the FSCL much closer to the FEBA gains weight.[31]

Interestingly, U.S. Marine Corps forces did not experience the same battlespace integration problems that the U.S. Army and the U.S. Air Force did, for two reasons, one procedural and the other cultural. From the procedural perspective, the 1st Marine Expeditionary Force employed a battlefield coordination line, which the 3rd Infantry Division's OIF after action report also recommended the Army adopt. A *battlefield coordination line* is a supplementary fire support coordinating measure that facilitates rapid attack of targets between it and the FSCL. Consequently, during OIF, the "Marines defined a battlefield coordination line much closer to friendly forces and opened all kill boxes beyond this line, an approach that promoted a much more efficient use of air power."[32]

The cultural dimension also helps to explain why the Marine Corps can more readily incorporate fixed-wing aircraft into its opera-

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[31] Current Army aviation doctrine still envisions deep attack—or "mobile strike"—operations as a mission for attack aviation. See U.S. Department of the Army, Field Manual Interim (FMI) 3-04.101, *UEx Aviation Brigade Organization, Training, and Operations*, Washington, D.C., 2005, which notes:

> Mobile strike operations are extended combat operations that capitalize on the ability of attack aviation to maneuver to the full depth of the UEx AO, deliver massed fire, and employ precision munitions in support. The UEx executes mobile strikes outside of the BCT areas against targets that are capable of maneuvering to avoid precision strikes.

[32] Bruce R. Pirnie, Alan Vick, Adam Grissom, Karl P. Mueller, and David T. Orletsky, *Beyond Close Air Support: Forging a New Air-Ground Partnership*, Santa Monica, Calif.: RAND Corporation, MG-301-AF, 2005, p. 68.

tions than can the Army. From the earliest days of U.S. military aviation, the Marine Corps and the Navy resisted efforts led by Army Air Service air power advocates to create an air arm separate from their services. This close integration of aviation in the Marine Corps, dating to the 1920s, and the belief of Marine aviators that they are Marines who happen to fly result in a service culture that relies on routinely integrating air power into its operations.[33]

For its part, Air Force culture similarly inhibits close integration with the Army. While senior Air Force officers today are committed to supporting land operations and have proven willing to allocate very large portions of the overall air effort to this task, they still do not trust the Army on its own to employ air power properly. And they are extremely reluctant to cede operational control of their instruments to nonairmen.[34]

Given the post–Cold War evidence of the increasing capability of air power—and the Marine example in OIF of the effective integration of ground and air power—there is a compelling need for the Army to reassess its corps deep battle doctrine and fire support coordinating measures.

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[33] See U.S. Department of the Navy, AH-1, *Aviation Training and Readiness (T&R) Manual,* Marine Corps Order 3500.48, Washington, D.C.:, 2001, p. 3. As does the Army, the Marine Corps employs attack helicopters. The Marine Corps organizes its attack helicopters in light attack squadrons. The Mission Essential Task List for these units does not include the deep attack mission contained in Army doctrine for attack helicopter operations.

[34] The continued reluctance of the Air Force to integrate closely with the Army is apparent in the latest version of U.S. Department of the Air Force, Air Force Doctrine Document (AFDD) 2-1.3, *Counterland Operations*, Washington, D.C., 2006, p. 5, which notes:

> The purpose of interdiction is to attack the enemy's ability to fight by targeting tactical and operational forces and infrastructure with either lethal or non-lethal means. . . . *The Air Force defines AI [air interdiction] as air operations conducted to divert, disrupt, delay, or destroy the enemy's military potential before it can be brought to bear effectively against friendly forces, or to otherwise achieve JFC objectives. AI is conducted at such distance from friendly forces that detailed integration of each air mission with the fire and movement of friendly forces is not required*. [Emphasis in the original.]

What Is the Future of Ground Power?

There are important positive ground power lessons from the post-Cold War era, particularly from OIF, that illuminate the possible future of ground warfare. The Army remains a vital component of the overall joint effort in successfully conducting warfighting operations. But its role, at least in these conflicts, differed from what it was in the past. Although the Army will still have to close with and destroy the enemy, the enemy will likely be arrayed in smaller units than in the past. Today, the United States has a C4ISR and strike advantage, made possible by air dominance, that makes it extraordinarily difficult for substantial mounted ground formations to hide or move without being engaged by air power or, for that matter, Army indirect fire systems that can range them. Therefore, those attempting to frame the present with past metaphors—e.g., "hammer and anvil"[35]—are missing the key dimensions of what appears to be an emerging new operational reality.

Major General Robert Scales takes on the question of what has changed in his book *Yellow Smoke: The Future of Land Warfare for America's Military*. One of his recommendations is to: "[a]dopt an operational maneuver doctrine based on fire power doctrine and area control" because "[o]n a vastly more expanded and lethal battlefield, where maneuver supports fire, a force will succeed only if freed from the traditional constrictions of linear maneuver and direct control."[36] Scales then goes on to challenge one of the tenets of U.S. Army doctrine—that of ground forces closing with and destroying the enemy, fundamental to Army doctrine since at least 1923, stating, "The task of destroying the enemy now belongs to firepower, not maneuver, systems."[37]

This assessment of post–Cold War lessons shows that, since the first Gulf War, ground maneuver forces have performed three unique roles that should be incorporated into Army plans for its Future Force. First, the presence of a ground component in OEF and OIF forced the adversary to react to that presence. Second, ground forces in OEF and

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[35] Pape (2004), pp. 116–130.

[36] Robert H. Scales, Jr., *Yellow Smoke: The Future of Land Warfare for America's Military*, Lanham, Md.: Rowman and Littlefield, 2003, p. 156.

[37] Scales (2003), p. 157.

OIF have, as always, taken on the tough, dirty business of going after pockets of tenacious resistance and have contended with insurgencies in the wake of both wars. Third, ground forces have remained in the countries in which rapid victories have turned into enduring stability and support missions: keeping the peace in Kosovo and trying to bring peace to Afghanistan and Iraq.

OIF also offers some cautionary lessons that should resonate deeply with the Army. Despite the remarkable capacity of U.S. ISR systems to find large units, smaller formations often went undetected until they were in direct fire range of Army ground combat units. Again, as already noted, the Army's own history of OIF, *On Point*, recognized this situation: "Most tactical unit commanders claimed that they made every assault as a movement to contact."[38]

As it looks to the future of ground forces, the Army appears to be selectively applying lessons learned in post–Cold War operations. In current operations, it is adapting to the operational environment; however, these lessons from ongoing operations across the globe are mostly being incorporated as "TTPs" (tactics, techniques, and procedures) rather than making their way into Army doctrine. The Army must fully take on the tough, long-term missions across the range of military operations—e.g., counterinsurgency—that only ground forces can accomplish. Acquiring the necessary Army concepts and capabilities for these missions will require long-term institutional solutions across the doctrine, organization, training, materiel, leadership and education, personnel, and facilities categories that inform how the Army conceptualizes and manages change.

This is not to say that the Army should abandon its warfighting focus. Instead, it is to argue that a narrow view of the range of military operations that turns warfighting, particularly at the operational level, into the institution's defining *raison d'être*, with all else being lesser-included cases, limits the effectiveness of the Army and shortchanges the nation. The nation expects and deserves to have an Army that is fully prepared across the entire range of military operations.

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[38] Fontenot, Degen, and Tohn (2004), p. 423.

The Future Air Force as an Evolving Idea

Unlike the Army, whose learning has been largely framed by its constancy in adhering to its traditional central doctrinal tenet that wars are won by ground forces closing with and defeating the enemy, the Air Force has recently shown more capacity for adaptation. In many ways, it is a service focused on proving an idea: that independent air power can be decisive in and of itself. In the post–Cold War period, the Air Force has employed warfighting strategies whose broad conceptual approaches have been quite diverse in the pursuit of this idea.

In the first Gulf War, the air campaign was initiated at the start of Desert Storm and combined counterair, suppression of enemy air defenses, strategic attack, and interdiction. During the ground war, these components of the air campaign continued, but the Air Force also provided close air support to ground forces. In Operation Allied Force, Air Force officers believed that the most important use of air power was to employ it against strategic targets in Belgrade, rather than against Serb forces in Kosovo. In Afghanistan, air power showed its greatest utility in attacking Taliban and al Qaeda forces in the field, tipping the battlefield balance against them and in favor of the Northern Alliance and other Afghan forces. Finally, in OIF, the Air Force selectively attacked strategic targets, but it made its most significant contribution during major combat operations by shattering Iraqi forces in the field.

Lessons from recent operations have made their way into Air Force doctrine. In the area of "strategic attack," the 1992, 1997, and 2003 versions of the Air Force's principal doctrine manual differ in fundamental ways. The 1992 manual emphasized that "the objective of strategic attack is to destroy or neutralize an enemy's war-sustaining capabilities or will to fight."[39] The 1997 doctrine was more expansive and included categories of fielded forces as potential centers of gravity

[39] U.S. Department of the Air Force, Air Force Manual (AFM) 1-1, *Basic Aerospace Doctrine of the United States Air Force*, Volume I, Washington, D.C., 1992, p. 6.

worthy of strategic attack.[40] Finally, in the 2003 version of *Air Force Basic Doctrine*, strategic attack had evolved to effects-based operations against an enemy system writ large and explicitly recognized its contribution to the ground scheme of maneuver.[41]

Air Force counterland doctrine has also adapted, with the 2003 version of *Air Force Basic Doctrine* incorporating the OEF experience. Although still acknowledging the objectives of counterland as "operations to dominate the surface environment and prevent the opponent from doing the same" and noting that air power could conduct counterland operations without friendly surface forces, the manual goes on to note that such operations could also be conducted "with only small numbers of surface forces providing target cueing," capturing the experience from OEF of SOF support to Afghan forces.[42] But the manual goes further. Instead of focusing on "halting" an adversary in a reactive response to aggression, the new manual adopts a more proactive posture: "This independent or direct attack of adversary surface operations by air and space forces is the key to success when seizing the initiative during the early phases of a conflict."[43] Furthermore, there are those within the Air Force who argue that because "[t]he Air Force has developed the capability to directly engage and render ineffective an adversary's land forces," counterland doctrine should be expanded. They advocate adding "direct attack" (formerly "battlefield air operations") to the existing counterland interdiction and close air support mission categories.[44]

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[40] U.S. Department of the Air Force, Air Force Doctrine Document (AFDD) 1, *Air Force Basic Doctrine*, Washington, D.C., 1997, p. 51.

[41] U.S. Department of the Air Force, AFDD 1, *Air Force Basic Doctrine*, Washington, D.C., 2003, pp. 40–41.

[42] U.S. Department of the Air Force, AFDD 1 (2003), pp. 43–44.

[43] U.S. Department of the Air Force, AFDD 1 (2003), p. 44.

[44] David A. Deptula, Gary L. Crowder, and George L. Stamper, Jr., "Direct Attack: Enhancing Counterland Doctrine and Joint Air-Ground Operations," *Air and Space Power Journal*, Winter 2003, p. 12. See also David A. Deptula and Sigfred J. Dahl. "Transforming Joint Air-Ground Operations for 21st Century Battlespace," *Field Artillery*, July–August 2003, pp. 21–25, and Phil M. Haun, "Vortices: Direct Attack—A Counterland Mission," *Air and Space Power Journal*, Summer 2003, pp. 9–16.

Implicit in the arguments for direct attack as a mission category is the requirement for the air component commander to control these operations. The air component commander would also be given the resources to plan direct attack and could be the supported commander.[45]

Such a shift is guaranteed to raise the hackles of ground proponents and exacerbate the issues that have existed between the two services for decades. Direct attack will be perceived as a power grab by air power advocates who, having clearly gained equality with the surface components, now want preeminence. Such preeminence will affect both warfighting concepts and, perhaps even more important, service bureaucratic imperatives and budgets. From a warfighting perspective, any new arrangements for direct attack are probably unnecessary if the issues of AO designation, fire support coordinating measures, and support of the JFC are adequately addressed.

Another emerging change in Air Force (and joint) doctrine is the notion of "effects-based" operations, where operational functions are "tied to specific effects."[46]

However, effects-based operations are still, partly, if not largely, an art more than a science, given the difficulty that persists in obtaining reliable pre-strike intelligence and post-strike battle damage assessment. Absent exquisite intelligence (and a C4ISR-strike capability that can adapt in near real time to measurable changes in the adversary's system), it will be difficult to determine with any certainty the first-order, much less the second- and third-order, effects whose achievement will be necessary to have the desired overall effects on an enemy's system. All that said, the notion of effects-based operations reflects an effort to understand and attack the enemy as a system and to apply air power in a more efficient and intelligent way than merely "servicing" a set of targets.

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[45] Deptula, Crowder, and Stamper (2003), pp. 9–12.

[46] U.S. Department of the Air Force, AFDD 1 (2003), p. 38. See also U.S. Joint Forces Command, *Pamphlet 7: Operational Implications of Effects-Based Operations (EBO)*, Suffolk, Va.: The Joint Warfighting Center, 2004, p. 2.

Air Force Culture and Interservice Cooperation

If there is an Air Force culture, it is one that, in the words of Carl Builder,

> [C]ould be said to worship at the altar of technology. The airplane was the instrument that gave birth to independent air forces. . . . There is a circle of faith here: If the Air Force fosters technology, then that inexhaustible fountain of technology will ensure an open-ended future for flight (in airplanes or spacecraft) that, in turn, will ensure the future of the Air Force.[47]

However, despite the advances in its capabilities and its obvious value in operations since the end of the Cold War, another dimension to Air Force culture persists: a tendency to continue to assert its independence and equal status with land and naval power:

> *Air and space power is a maneuver element in its own right, coequal with land and maritime power*; as such, it is no longer merely a supporting force to surface combat. As a maneuver element, it can be supported by surface forces in attaining its assigned objectives.[48]

This passage from the 2003 version of *Air Force Basic Doctrine* is remarkably similar to the statement in the 1943 FM 100-2, *Command and Employment of Air Power*, written when the Air Force was still part of the Army: "LAND POWER AND AIR POWER ARE CO-EQUAL AND INTERDEPENDENT FORCES; NEITHER IS AN AUXILIARY OF THE OTHER."[49] Clearly, there is broad recognition of the critical contribution of air and space power to warfighting throughout the Department of Defense. But Air Force culture requires formal acceptance of its equality with the other services, lest that equality be jeopardized by having the Air Force relegated to the role of a supporting force.

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[47] Carl Builder, *The Masks of War: American Styles in Strategy and Analysis*, Baltimore, Md.: Johns Hopkins University Press, 1989, p. 19.

[48] U.S. Department of the Air Force, AFDD 1 (2003), p. 16. Emphasis added.

[49] U.S. War Department, FM 100-2 (1943), p. 1. Capitalization in the original.

The Future of American Warfighting

At the risk of being overly simplistic, the debate between the Army and the Air Force over the relative roles of ground and air power is one that has, with varying degrees of stridency, been going on since 1918. Furthermore, the institutional perspectives and cultures of the two services fundamentally affect how they view their operational experiences and learn lessons. The Army uses lessons and adapts technologies to buttress its warfighting doctrine, which it believes is fundamentally sound and inherently guarantees its place as the supported force. The Air Force's doctrine evolves, grounded in the idea of the decisiveness of air power and a desire to be the preeminent warfighting supported service, to accommodate the empirically proven promise of ever-improving air power and related technologies. Given the divergence between these culturally based perspectives, tension between the two services will persist until these issues are addressed and resolved.

What Should Be Done?

Clearly, the issues identified in this study demand joint solutions. Fortunately, there are processes in place within the Department of Defense to implement the necessary reforms. The Joint Staff and the U.S. Joint Forces Command have the authority to promulgate joint doctrine and to experiment with new operational concepts, and they should exercise them more vigorously.[50] Any meaningful change to service warfighting doctrines and organizations will, however, likely meet strong service resistance.

An essential first step in reforming joint doctrine is to eliminate the principle that joint doctrine must defer to that of the services. At present, guidance to joint commanders is that "JFCs should allow Ser-

[50] See U.S. Code, Title 10, Subtitle A, Part I, Chapter 5, Section 153. This section of Title 10 describes the functions of the Chairman of the Joint Chiefs of Staff, which include the following: "Advising the Secretary on the extent to which the program recommendations and budget proposals of the military departments and other components of the Department of Defense for a fiscal year conform with the priorities established in strategic plans and with the priorities established for the requirements of the unified and specified combatant commands" and "Developing doctrine for the joint employment of the armed forces."

vice tactical and operational assets and groupings to function generally as they were designed."[51] Rather, the guidance should stipulate that the services should organize and equip themselves in ways that provide the JFC with capabilities and organizations that best realize the theaterwide campaign plan by providing integrated fire and maneuver. A lesser but still critical step would be to have the JFC withhold the authority to establish all fire support coordinating measures that could affect the theater campaign plan. These measures would begin the process of building a new U.S. warfighting construct that is truly joint and not a collection of service perspectives.[52]

These changes will be particularly difficult for the Army, given its operational warfighting focus. Although the Army clearly recognizes the increasing effectiveness of air power, to embrace this reality would require the Army to reassess the viability of the Apache helicopter and ATACMS as Army deep battle assets. Any such reassessment would be particularly difficult, given the Army's investment in these systems, from both a cultural perspective and a fiscal perspective.[53] The most difficult component of such an evaluation, however, would be the possibility that the Army would have to cede control of the cornerstone of its operational doctrine—corps control of deep operations—to the air component commander as the agent of the JFC. In short, the task of strategically and operationally shaping the theater should be an air component function, and joint and service doctrines and programs should change accordingly.

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[51] U.S. Joint Chiefs of Staff, JP 3-31 (2004), p. III-2.

[52] An alternative perspective, with which I largely disagree, views interservice rivalry as a positive force. See Stephen Peter Rosen, "Service Redundancy: Waste or Hidden Capability?" *Joint Force Quarterly*, Summer 1993. Rosen argues, "The defense establishment should not turn a blind eye to the warp in which creative competition among the services can encourage the development of new capabilities in even a period of fiscal constraint."

[53] Attack helicopters and deep operations lie at the core of the institutional essence of the Army's aviation branch. ATACMS, although not as central as cannon artillery to the self-image of the Army's field artillery branch, are the principal means through which that branch contributes to the deep battle central to Army operational doctrine. One could expect these Army constituencies to resist any radical change to the missions or control of either of these systems.

In the future, the principal roles of the Army (and Marine Corps) in joint theater warfighting should be to employ their overwhelming tactical dominance to

- force enemy reaction at the operational and strategic levels by forcing concentration or movement, thus making enemy forces more vulnerable to air attack
- close with and finish enemy tactical remnants, exploit success, and seize and hold ground
- take the lead in securing U.S. interests in the postconflict security environment until the desired strategic end state is reached.

Air power roles should be to

- shape the theater at the operational and strategic levels
- provide CAS, ISR, and lift to support ground combat operations
- provide CAS, ISR, and lift for ground force operations to secure and stabilize the theater.

Again, accepting and implementing these doctrinal changes will be particularly difficult for the Army, given its focus on operational-level warfighting.

The Air Force, for its part, should continue training, organizing, and equipping forces for the flexible application of air power at the strategic and operational levels—while also providing responsive close air support—to support the JFC's campaign and, specifically, scheme of maneuver. Furthermore, the targeting process should be closely integrated with the JFC's scheme of maneuver and intent. In short, air power, while conducting strategic attack in support of the theater campaign, must also be prepared to operate interdependently with ground forces at the operational and tactical levels.

Reforms Beyond Warfighting

A related issue looms large in U.S. security affairs. What has emerged in the American way of war is an unmatched capacity to conduct operations and win battles. Winning a military campaign decisively is a

warfighting, operational capability. What it is not is a recipe for assured strategic political victory, as evidenced by the fact that U.S. forces, as already noted, remain in Kosovo, Afghanistan, and Iraq, with no end in sight.

Thus, the irony of this study's assessment of the relative relationship of U.S. air power and ground power is tied to this reality: In the world in which the United States is the "sole remaining superpower," its operational prowess and immense technological advantages do not necessarily guarantee the achievement of an end state that favors U.S. strategic interests. As events in Kosovo, Afghanistan, and Iraq have shown, substantial and often-specialized investments, particularly in ground forces, are required to turn warfighting successes into the desired strategic political end states and the accomplishment of national policy objectives.[54]

The Army will be the service expected to provide many of the new capabilities for military operations other than war. To its credit, the Army is energetically adapting to the situations in which it now finds itself. Nevertheless, a review of the Army's concepts for the future reveals a remarkable consistency in the belief that well-trained combat forces are capable of performing any task.[55]

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[54] See U.S. Department of Defense, Department of Defense Directive 3000.05, *Military Support for Stability, Security, Transition, and Reconstruction (SSTR) Operations*, Washington, D.C., November 28, 2005, p. 2. This directive has begun the process of raising stability operations to a level equivalent with warfighting, stating:

> Stability operations are a core U.S. military mission that the Department of Defense shall be prepared to conduct and support. They shall be given priority comparable to combat operations and be explicitly addressed and integrated across all DoD activities including doctrine, organizations, training, education, exercises, materiel, leadership, personnel, facilities, and planning.

[55] For an example of an Army unit learning and adapting in the field, see Peter W. Chiarelli and Patrick R. Michaelis, "Winning the Peace: The Requirement for Full-Spectrum Operations," *Military Review*, July–August 2005, pp. 4–17. See also Nigel Aylwin-Foster, "Changing the Army for Counterinsurgency Operations," *Military Review*, November–December 2005, pp. 2–15. This article is by a British Army brigadier general who believes that "[t]he U.S. Army's tardiness in adapting to the changing operational environment in OIF phase 4 was indeed a contributory factor in the Coalition's failure to exploit the rapid victory over Saddam achieved in the preceding conventional warfighting phase." He also points to the difficulty of changing the U.S. Army, noting (p. 14) that it

Therefore, the final conclusion of this study is that many of the purported lessons learned about the relative roles of air and ground power since the end of the Cold War have been interpreted within service perspectives. Much work remains to attain a truly joint American warfighting system, including reinterpreting the "lessons" from recent conflicts. Even more work is needed to mold U.S. warfighting prowess into capabilities to achieve national objectives after the combat phase—the strategic realm in which post-warfighting victory is secured for the nation—and it is largely and intrinsically ground-centric. Consequently, given the effectiveness of air power in deep operations, perhaps the time has come to assess whether the Army should be substantially redesigned to prepare for winning and not just fighting the nation's wars. Resources for this redesign should come in part from existing or envisioned deep operations capabilities—from across the services—that can be more effectively provided by air power.

In particular, Army attack aviation should focus on the missions it has performed so well in major combat and stability operations in Iraq—for example, close support of ground forces, armed reconnaissance, and precision attack in urban areas.

Given existing service cultures and perceptions, reform will be difficult. Nevertheless, these reforms must proceed apace to ensure that the United States has the capacity to deal with the strategic realities of the 21st century.

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has been a victim of its own successful development as the ultimate warfighting machine. . . . over time the Army has developed a marked and uncompromising focus on conventional warfighting, leaving it ill-prepared for the unconventional operations that characterise OIF Phase 4.

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